



UNIVERSIDADE CATÓLICA PORTUGUESA

USER ENGAGEMENT AND SATISFACTION IN THE AGE OF AI:
A STUDY OF INTEGRATION IN GERMAN MEDIA COMPANIES
– THE CASE OF PROSIEBENSAT1

Internship Report submitted to Universidade Católica
Portuguesa to obtain a Master's Degree in Communication.
Specialization: Media & Entertainment

BY

Chiara Schorbach

Faculdade de Ciências Humanas

September 2024



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Resumo Português

Este estudo explora o impacto da integração da Inteligência Artificial (IA) no envolvimento e na satisfação dos utilizadores de uma grande empresa de comunicação social, especificamente a ProSiebenSat.1. Através de uma abordagem de métodos mistos, a investigação incorpora entrevistas qualitativas com seis especialistas do sector e um inquérito quantitativo com utilizadores de IA. O estudo fornece uma visão abrangente sobre a forma como as tecnologias orientadas para a IA estão a remodelar o consumo dos meios de comunicação social. A tese de mestrado começa com uma descrição do estágio na ProSiebenSat.1 através de uma recordação descritiva. A revisão da literatura dá ênfase aos fundamentos da inteligência artificial, explicando a sua definição, antecedentes e instâncias para este estudo. Além disso, concentra-se na questão do estudo, destacando o papel da IA nos meios de comunicação social e nas redes sociais. Esta investigação inclui um capítulo sobre ética, bem como o seu papel significativo e importante na investigação. Seguem-se as ferramentas ProSiebenSat.1 que são utilizadas para ajudar a interpretar as declarações dos entrevistados. A tese de mestrado termina com a metodologia e a conclusão.

Os principais resultados indicam que existe um elevado nível de sensibilização e de utilização da IA entre os utilizadores, mas que a satisfação com a personalização baseada na IA continua a ser variada e não consistente, o que evidencia a necessidade de melhorias. O estudo também revela uma preocupação significativa em relação à privacidade dos dados e à utilização ética da IA, sublinhando a importância da transparência e da responsabilidade para manter a confiança dos utilizadores. As conclusões sugerem que o potencial da IA para melhorar a eficiência operacional e personalizar a experiência do utilizador é evidente, mas continuam a existir desafios na realização plena deste potencial. A investigação faz várias recomendações, incluindo a melhoria das características de personalização da IA, a resolução de questões de privacidade, a sensibilização dos utilizadores para a IA e a investigação de potenciais integrações futuras com tecnologias de ponta como a realidade virtual (RV) e a realidade aumentada (RA). A investigação futura deve também concentrar-se em comparações entre sectores, estudos longitudinais dos efeitos da IA e análises aprofundadas da ética da IA e da atenuação de preconceitos.

O futuro da IA continua a ser entusiasmante, com um maior crescimento e integração em várias áreas e indústrias. No entanto, a utilização da tecnologia deve continuar a ser monitorizada para manter sob controlo as questões éticas e socioeconómicas. A resolução destes desafios é importante, uma vez que as empresas de comunicação social devem continuar a trabalhar com a IA para capitalizar o envolvimento e a satisfação. Isto altera a forma como o público interage com os conteúdos.

Palavras chave:

1. Inteligência Artificial Media Consumption
2. Envolvimento do utilizador AI Integration
3. Consumo de media
4. ProSiebenSat.1
5. Integração da IA
6. Abordagem de método misto
7. Tecnologias orientadas para a IA
8. Privacidade dos dados
9. Ética na IA
10. Transparência

Abstract English

This study explores the impact of Artificial Intelligence (AI) integration on user engagement and satisfaction within a large media company, specifically ProSiebenSat.1. Through a mixed-method approach, the research incorporates both qualitative interviews with six industry experts and a quantitative survey with users of AI. The study provides comprehensive insights into how AI-driven technologies are reshaping media consumption. The master's thesis begins with a description of the internship at ProSiebenSat.1 through a descriptive recollection. The literature review emphasises the fundamentals of artificial intelligence, explaining its definition, background, and instances for this study. Additionally, concentrating on the study issue while highlighting AI's role in media and social media. This research includes a chapter on ethics, as well as the significant and important role in the research. The ProSiebenSat.1 tools that are used to help interpret the interviewees' statements come next. The Master's Thesis is concluded with the methodology and conclusion.

The key findings indicate that there is a high level of awareness and usage of AI among users, satisfaction with AI-driven personalisation remains varied and not consistent, highlighting a need for improvement. The study also uncovers significant concern regarding data privacy and ethical AI use, emphasizing the importance of transparency and accountability in maintaining user trust.

The findings suggest that AI's potential to enhance operational efficiency and personalise user experience is evident, but challenges remain in fully realising this potential. The research makes several recommendations, including improving AI personalisation features, resolving privacy issues, raising user awareness of AI, and investigating potential future integrations with cutting-edge technologies like virtual reality (VR) and augmented reality (AR). Future research should also concentrate on cross-industry comparisons, longitudinal studies of AI's effects, and in-depth analyses of AI ethics and bias mitigation.

The future for AI remains exciting, with further growth and integration in various areas and industries. However, the use of the technology must continue to be monitored to keep ethical and socio-economic issues under control. Addressing these challenges is important as media companies must continue to work with AI to capitalize on engagement and satisfaction. This changes how audiences interact with content.

Key words:

11. Artificial Intelligence
12. User Engagement
13. Media Consumption
14. ProSiebenSat.1
15. AI Integration
16. Mixed-Method Approach
17. AI-driven technologies
18. Data privacy
19. Ethical AI
20. Transparency

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Introduction to Artificial Intelligence in Media Companies

This research paper discusses the topic of Artificial Intelligence in Media Companies, mainly focusing on the company ProSiebenSat.1. The Research Question (RQ) for this study is: How does the integration of Artificial Intelligence impact user engagement and satisfaction in online platforms in a large media company like ProSieben Sat1? ProSiebenSat.1 is a media company that includes Infotainment, Entertainment, and E-Commerce providers. The Entertainment Portfolio includes many digital consumer brands in the commerce, ventures, Dating and Video segments. The choice of this organisation is the result of a mandatory six-month internship. Throughout the internship, a notable shift occurred, characterised by the increasing incorporation of artificial intelligence (AI) into multiple aspects of the business's operations and processes.

In the contemporary landscape of technology-driven evolution, Artificial Intelligence (AI) stands as a non-bypassing force, reshaping industries, revolutionising processes, and redefining the very fabric of human-machine interaction. At its core, AI embodies the mix of intelligent agents, algorithms, and computational power, capable of mimicking cognitive functions such as learning, reasoning, problem-solving, and decision-making. This transformative technology has permeated diverse sectors, with media companies emerging as pivotal players in harnessing its potential (Meena, Jingar, & Gupta, 2020). This topic is extremely relevant because media companies realise that personalization demands have reached unprecedented levels. AI empowers media companies to deliver customised content recommendations, advertisements, and user interfaces, creating more engaging and relevant experiences for individuals. Moreover, the significance of the study is understanding the ramifications of AI integrations that allow the analysed company to make strategic decisions for long-term objectives. By gaining insights into how AI affects user engagement and satisfaction, the company can refine its AI strategies to enhance the overall user experience, ultimately driving growth and profitability. To build a loyal and satisfied audience base, prioritising user engagement and satisfaction is paramount.

The study begins with an introduction outlining its objectives and situating the research within the media ecosystem. A thorough analysis of the research on AI in media and user engagement measures is then presented. The approach goes into great depth on the study

design, data gathering methods (like surveys, user analytics, and A/B testing), and ethical issues. Results include insights particular to ProSiebenSat.1 as well as the results of an A/B testing. They are based on both quantitative and qualitative evaluations. In addition to acknowledging the limits of the study, the discussion evaluates the data and considers ramifications for ProSiebenSat.1 and the industry at large. The conclusion highlights important discoveries, knowledge advances, and provides suggestions for ProSiebenSat.1 and future lines of inquiry. The references provide pertinent research, and the appendices offer more information on the survey instrument, participant permission, and A/B testing protocols.

When the internship began in July 2023, artificial intelligence (AI) was still in its infancy within the organisation. However, as the internship went on, it became clear that AI was quickly taking centre stage in determining how the business approached social media management and interaction. Active engagement in various initiatives and cooperative efforts helped highlight the significant influence of AI on workflow optimization, process simplification, and improving user experiences.

The company's use of AI evolved into a focus for investigation and observation. This was marked by an ongoing pursuit of knowledge as fresh perspectives on the uses and ramifications of artificial intelligence in the context of social media emerged. The internship gave a personal look at how AI might revolutionise traditional paradigms, from comprehending the underlying algorithms that drive content suggestions to seeing the implementation of AI-driven chatbots for user interactions.

The internship experience is evidence of how quickly technology is developing and how much of an impact it has on the social media world today. What started out as a simple investigation of social media dynamics turned into a journey into AI and the social media world (Green, 2023).

This growth also means that the integration of artificial intelligence into the business processes of the entertainment and media industry has become an essential component. The growing demand for technology to enhance operations in the media and finance sectors is anticipated to increase market demand (Meena, Jingar, & Gupta, 2020).

Through the fast distribution of ChatGPT, people accessing the user-friendly tool have become more aware of AI in the world. Moreover, movies such as *Ex Machina*, *Blade Runner 2049* and *Her* have been exploring the ways that artificial intelligence can work and

how AI can quickly exceed the limits, such as machines that can no longer be controlled. Not only do the movies include impressive cinematic experiences, but they also lead to thought-provoking windows, such as the potential of AI and the ethical complexities (Takyar, LeewayHertz, 2024) This is one of the reasons why addressing this topic is critical in many ways. Several key reasons contribute to the timeliness and significance of AI, making it a transformative force in the contemporary era.

Moreover, with the demand for diverse and high-quality content, media companies are leveraging AI to automate various aspects of content creation. From generating articles to editing videos, AI-driven tools enhance efficiency, reduce costs, and ensure a consistent flow of engaging content. The importance of AI for media companies lies in its capacity to address contemporary challenges, capitalise on emerging opportunities, and redefine the landscape of content creation, distribution, and audience engagement. The intersection of AI and media not only aligns with current technological capabilities, but also anticipates and shapes the future trajectory of the industry. As a result, the adoption of AI is not merely a trend but a strategic step for media companies aiming to thrive in the digital era (Meena, Jingar, & Gupta, 2020)

Many companies use AI now for support, not for replacement of workers, many with constructive motives. This can be in work processes to support but also in content creation, with AI starting to learn how audio and visual content can be personalised based on the user's engagement. These algorithms analyse the demographic data for movies, music and videos to make the user satisfied. Through these personalization tools, entertainment companies can outperform their competitors by expanding their user base and providing a better service for their customers (Takyar, LeewayHertz, 2024). This is also the case at ProSiebenSat.1, since people want to read and see what is preferably in their favour. Exploring this category of AI in the online section is crucial because it will benefit the future of user engagement for media companies. The focus of this study will remain on the social media platforms used (Instagram (IG), Facebook (FB) and TikTok) and the websites from the company, such as ProSieben (<https://www.prosieben.de/>) and Sat.1 (<https://www.sat1.de/>). By addressing different components of these points, this research will be able to create a comprehensive description that captures the impact of AI integration on user motivation and satisfaction within the context of ProSiebenSat.1's online media platforms.

Regarding the Research Question stated above, AI is essential for the company ProSiebenSat.1 and many other media companies. It can help strategic decision-making, competitive positioning, user-centric approach, and resource optimization (Harber, 2023)

The influence of AI on the company is that it can tailor its digital strategies to meet the needs and preferences of users better. This user-centric approach not only helps with strong connections to the audience but also drives long-term loyalty (Green, 2023). Additionally, gaining insights into the impact of AI on user engagement and satisfaction enables the media company to optimise its resources more effectively. By investing in AI-driven solutions that yield tangible improvements in user experience, the company can allocate resources more efficiently and maximise the return on investment.

To answer the research question, a mixed-method approach was chosen. It is employed to comprehend ideas, feelings, or encounters. This kind of research provides the opportunity to learn about poorly understood subjects. Open-ended interview questions, verbal descriptions of observations, and literature reviews that delve into ideas and theories are examples of common qualitative techniques. Nevertheless, certain research biases, observer prejudice, recollection bias, and social desirability bias, can affect qualitative research (Streefkerk, 2023). Moreover, this method was also chosen because the research question does not imply confirmation or a test, but it is trying to understand the concept of AI in the online section of the media company. The data collecting method used is Interviews with ten experts in the AI section of the company ProSiebenSat.1. One of them is the Vice President of Artificial Intelligence Products at ProSiebenSat.1 Media SE, however, does not want to be mentioned by name in this research.

The interviews will offer in-depth insights and enable researchers to elucidate and expand upon the experiences of participants. This method offers flexibility in data collection and cultivates a human connection that elicits sincere responses. Furthermore, interviews aid in providing a contextual awareness of the organisational and business environment (Interview in Research: Types & Characteristics | StudySmarter, n.d.).

The other methodological approach is the quantitative approach of a survey of the users. This will enable us to confirm and test the assumptions being made. The survey for this research will include readers of the two different websites (ProSieben & Sat.1) in all age groups. However, teenagers and adults will be the target audience, since some elders might not have much access to online possibilities. When the surveys are completed, there will be

diagrams, and these will be analysed and compared to other answers from other participants. The focus of the Survey will lay especially on the engagement and satisfaction of the reader. When both approaches are used together, the research subject can be fully understood since it combines quantitative breadth and qualitative depth (Interview in Research: Types & Characteristics | StudySmarter, n.d.).

Chapter 1:

Descriptive Memory: Internship at ProSiebenSat.1

1.1. Place of internship, duration, coordination & area of department

This report is a thorough analysis of the experiences, learnings, and contributions I made while working at one of the third-strongest sales media companies in Germany, (Harms, 2024) ProSiebenSat.1. In my six-month internship at the company, which took place from July 2023 to January 2024, I got to know ProSiebenSat.1s commitment to pushing the boundaries of creativity and technology made it an ideal environment to delve into the ever-evolving landscape of the media industry.

ProSiebenSat.1 has grown into a major global media company with a varied portfolio that includes digital, streaming (streaming platform called joyn), and broadcast channels. The organisation has an in-depth understanding of audience dynamics and is adept at producing material that appeals to a wide range of demographics.

At ProSiebenSat.1, I was positioned inside the Social Media Team, a creative and strategic hub that was able to shape the digital presence of two major shows, *Taff* and *Frühstücksfernsehen* (Breakfast television), along with many other shows. The Team was called CCC, which stands for *Central Content Creation* and, after an internal reconstruction, changed into the name DMPC, which stands for *Digital Media Production Content & Creation*. More information will follow.

The internship length allowed for a deep dive into the special features of the industry, offering a holistic understanding of the day-to-day operations, strategic planning, and collaborative efforts required to keep pace with the relentless momentum of the media world.

Frühstücksfernsehen, a morning TV show broadcasting from 5:30 am to 10:30 am every weekday on the Channel *ProSieben*, and *Taff*, a dynamic evening show airing from 5:00 pm to 6:00 pm Monday to Friday on *Sat.1*, presented distinct challenges and opportunities for social media engagement.

The morning TV show of *Frühstücksfernsehen* demanded an approach attuned to early risers, engaging audiences during the breakfast hours and informing them with topics such as health, news, interviews with celebrities and many other engaging formats. *Taff*'s evening slot required a strategy that resonated with viewers seeking news updates and social topics

such as celebrity news, global news and social topics, such as lifestyle and health. Coordinating social media efforts for these programs exposed me to the nuances of tailoring content strategies to diverse audience demographics and time frames.

My time at ProSiebenSat.1 was marked by responsibilities and experiences that I have never been able to experience in any other internship before. From creating compelling social media campaigns to navigating the real-time demands of two distinct programs, the journey was filled with challenges and triumphs.

This report aims to capture not only the tasks accomplished, but also the insights gained and the lasting impact of this internship on my personal and professional growth.

1.2 Tasks

My involvement with ProSiebenSat.1's Social Media Team was marked by a wide range of responsibilities that enhanced my knowledge of the media environment and allowed me to actively participate in the vibrant online presence of two well-known TV shows. The varied duties I performed during my internship were as follows:

Along with other interns, I took an active part in presenting the newest social media trends through PowerPoint presentations. We gathered current TikTok challenges and trends and presented these regularly in front of the whole team. Moreover, once a month, we had a two-hour-long presentation in front of different teams, from different sectors of the company, with updates regarding technology, apps, social media, podcasts and many other things. These usually took around a day to prepare. These workshops promoted an atmosphere of ongoing learning and flexibility by providing a chance to investigate cutting-edge platforms, engagement tactics, and business innovations. Presenting and talking in front of many people has long been a big weakness of mine, so this experience has allowed me to leave my comfort zone. A pivotal role in the content creation process involved cutting clips from the two TV formats (*Taff & Fruehstuecksfernsehen*), ensuring that engaging and shareable snippets were ready for social media platforms. This task demanded a keen eye for selecting compelling moments that resonated with the target audience. Playing an integral role in the planning phase, I contributed to the development of comprehensive social media strategies. This involved aligning content calendars with the broadcast schedule, ensuring a cohesive and synchronised online presence for both *Frühstücksfernsehen* and *Taff*.

Leveraging my design skills, I crafted visually appealing and informative posts using Adobe Photoshop and Illustrator. These posts served to enhance the programs' online presence, conveying information in a visually compelling manner to captivate the audience. As an engaged team member, I actively participated in team meetings and was able to offer insights and suggestions. This collaborative environment allowed for the exchange of ideas, fostering a culture of innovation and collective problem-solving.

Another aspect of content creation involved writing articles for the *ProSieben* and *Sat.1* websites. These articles covered a range of topics related to TV programs, providing additional content for online audiences and enhancing the overall digital experience. Mostly, I was able to write on one of my favourite topics of journalism, especially focusing on fashion.

Crafting captivating and engaging captions for social media posts was one of my key responsibilities. These captions played a crucial role in complementing visual content, sparking audience interest, and encouraging interaction across various platforms.

The exploration and understanding of the *Meta* Planning Platform were integral to my role. Learning the intricacies of this platform allowed for efficient scheduling, tracking, and analysis of social media activities, optimising the overall digital strategy.

Active audience participation was required to manage the *Frühstücksfernsehen* and *Taff* communities on Facebook and Instagram. The positive online presence of the programs was facilitated by monitoring online interactions, encouraging conversations, and responding to comments. Every day I had to check the tool *Amplify* for Community Management. There were negative and positive interactions, which I had to comment on or even hide. I deleted hate speech, fake news and many other comments that could harm individuals. On some days, it took me a long time to check the comments, since sometimes we had over 900 of them.

Short-form video footage (known as 'Reels' on Instagram) has become a key component of social media interaction, and *Taff*, a program that pioneers news and social issues, sought to capitalise on this development. It was my responsibility to create, write, and produce reels that condensed *Taff's* content into succinct but powerful visual stories. The reels, which featured amusing behind-the-scenes photos and short clips of gripping tales, provided a platform for a wide range of viewers to engage with *Taff's* distinct style of entertainment and education. We had to brainstorm ideas for DIY (do-it-yourself) videos about Christmas

decorations. Another intern and I had to brainstorm ideas, present them in front of the team, and then create them. Sometimes we created up to 4–5 Reels per day. This took a lot of time and planning - through this process, we learned how to organise ourselves and also how to shoot and cut the Reels into good-looking videos to post. We then were allowed to give them captions and upload them. All in all, they did not reach the community as well as we thought they might. Thinking back, we should have used a better camera (we only used an iPhone camera) and better lighting. This experience has demonstrated that we should value quality over quantity when it comes to Instagram Reels.

Together, these assignments moulded my all-encompassing experience in the Social Media Team and highlighted the variety of abilities needed in the dynamic and always-changing field of media and digital content development.

1.3 Extra Requests

I've known ProSiebenSat.1 since I started watching TV as a young child. Through working in the company, I was able to get insights of how a media company with over 7,000 employees works. ProSiebenSat.1 headquarters operates in Germany, Munich, however, they also operate in Switzerland and Austria. The company's motto is: "Viewers and Users First". This means that viewers and users are at the centre of all activities and entertainment programs. The most important entertainment brands are 15 free- and pay TV channels, and the streaming platform *Joyn* which is becoming more the centre of their digital Entertainment Activities and presents. The Entertainment business thus forms the core of the ProSiebenSat.1 Group. I had the chance to observe and participate in this media industry thanks to ProSiebenSat.1's dedication to innovation and its commitment to pushing the frontiers of entertainment. When moving forward and improving the company in any category, the company has been speaking about a reformation and reconstruction of the whole company. Starting with the financial situation of the company. In the past, formats with famous German moderators like Harald Schmidt, Stefan Raab and Heidi Klum had attracted a large audience to the private TV station. But in 2023, the Group was fighting for its independence. The market shares of the two main brands ProSieben and Sat.1 were declining, the streaming platform Joyn was in danger of being forgotten and the once promising digital businesses Flaconi (Online Mail order Business which belongs to ProSiebenSat.1 Media SE since 2015) and Parship (Online Dating Service and belongs to

ProSiebenSat.1 Media SE since 2016. They hold 50% of the shares + a share of the Parship Elite Group) are no longer showing any momentum. Bert Haberts (Chief Executive Officer of ProSiebenSat.1 Media SE) is now set to change this, he came from market leader RTL and now aims to change the strategy (Clausen & Hinze, 2023). "In a constantly changing media industry, it is only logical that we have realigned our strategy and are constantly scrutinising our own positioning. In addition, we have to operate in an extremely challenging economic environment for the fourth year in a row," explains today's CEO Bert Habets, moreover he mentioned "It is therefore imperative that we significantly reduce our operating and personnel costs. The job cuts are a difficult decision, but one that is necessary from a business perspective so that ProSiebenSat.1 can increase its earning power and return to sustainable and healthy growth." This reduction project was known under the name "Horizon". The reductions in staff will be implemented through a voluntary program, aiming to minimise layoffs for operational reasons as much as possible. This includes strategies such as not filling positions that become open (Dpa & H.O., 2023). Valuable costs and time are saved through the reduction. This is because various processes and decisions are no longer delayed due to completely unnecessary settlements.

Back when Wolfgang Link, former CEO of ProSiebenSat.1 Media SE, left, there was already an indicator that something fundamental had to change. Above all was to simplify different work processes and reporting lines. The bundling under Henrik Pabst, Chief Content Officer, optimises the cross-media playout of content across all channels and platforms and promotes the interaction of all brands. However, there are also many personnel issues that need to be discussed. The complete restructuring also involved Joyn CEO Tassilo Raesig, CFO and COO René Sahm leaving the streaming service, according to a statement, "due to differing views on the future direction of the platform" (Lückerath, 2023). This was because the two did not agree with the new entertainment strategy and apparently had different ideas about what Joyn should look like. In order to bring all the changes to the company and save money, employees must expect a reduction. The employees were already aware of the general problems that face television nowadays and were unsure about the meeting and the outcome. Because the amount of time spent watching TV and listening to the radio has fallen since 2014 and the amount of time spent listening to content on the internet has risen from 61 minutes to 83 minutes in the same period, (Harms, 2024). This drastic change meant for a big company such as ProSiebenSat.1 Media SE a transformation.

One of the transformations meant that ProSiebenSat.1 decided to put its entire focus on Joyn. The previous executive from RTL plans to revitalise ProSieben, Sat.1, and Kabel 1 by reducing costs, primarily through a focus on entertainment. This strategy is expected to decrease personnel expenses by a low two-figure million amount in euros for the current year. The anticipated savings for 2024 are projected to be in the mid-range of two-figure millions in euros (Lückerath, 2023).

With a big Campus located in Unterfoehring, Munich, Germany, I was able to get a great look around, meet new people and leave my comfort zone.

My tenure at ProSiebenSat.1 was purposefully planned to give me a comprehensive overview of the media landscape, with an emphasis on audience engagement, content production, and distribution. I was given responsibilities right away that went above and beyond what an intern is typically expected to do. This allowed me to actively take part in initiatives that were essential to the company's overall objectives. My internship had learning as one of its main goals, but it also focused on creativity, active engagement, and the real-world application of theoretical knowledge. I didn't realise how many teams the company has. Because almost every post was discussed with different teams in meetings before the post was published - it takes time so that the posts become finalised and become open to the public.

My first day started calmly, although I already realised that there has been restlessness among the employees, more to that later. We were in an empty office room, and I was able to be part of the morning meetings. The first meeting is together with my supervisors, and we discuss the day and what is important going on. There are three people in this meeting. The next one is the *CCC Meeting* (now called *DMPC*). We talk about what goes online in social media for *Frühstücksfernsehen* and *Taff* and what goes on in different series that are important and go online on that day. Moreover, what articles go online on that day. We then started with doing some onboarding activities such as the access points to different programs that I need for the internship and explanations to plan in videos, photos, information graphics and many others. All in all, it was a lot to learn on that day, but I felt comfortable with my surroundings. The official rule of the whole corporate group is a two-day office policy, so there is one team day which is individual for each team, and the other three days are home office days. Of course, the possibility is always there for you to go into the office.

My second day was a little different from all the other days of my internship because the board of Executives organised a meeting with all the company's employees. The meeting lasted over 2 hours - as the topics are mostly confidential, it is difficult to reproduce everything as I had to sign a confidentiality agreement. The uncertainty and changes brought about by restructuring have affected employee morale and motivation, which I was able to hear out of conversations between my colleagues.

However, primarily the employees were worried about the reconstruction of the group, as it meant a reduction of jobs. At the time, it was still unclear who was affected by the lay off. The *Horizon* project should enable a 'safe downsizing', which means that damage should be kept at a minimum. Employees were able to voluntarily resign, and as a result receive a pay-out. Even then, they are safe and continue to receive their money. Through the job reduction, the company is aiming for minimal social disruption, primarily through a voluntary severance scheme, and seeks to avoid compulsory lay-offs. A spokesperson stated that unfilled open positions will contribute to the downsizing, which targets a 10% cut in the roughly 4,000 full-time roles across the corporate and entertainment division, (Reuters/Dpa, n.d.). Only meetings and Q&As were held because my team members were unsure about their future at the company. Luckily, my team was the least affected in terms of lay-offs. Social media is an important division within the company, and so we had support from the top level. In the next several weeks, employees sent out emails, informing the company of their resignation and saying their goodbyes. While our team was not so much affected by lay-offs, we had an internal restructuring, in which sub teams were merged, people were given new and different work areas and new supervisors were introduced.

It was interesting to be part of a restructuring of a huge company. Following the restructuring, I found myself reporting to different supervisors and working with new colleagues, which impacted established working relationships and team dynamics. A corporate reorganisation, like the one that took place at ProSiebenSat.1, can have a significant impact on workers in a number of ways. Some employees may have found that their current skill sets no longer align with the organisation's needs, necessitating retraining or upskilling to remain relevant in their roles. A company restructuring can influence the organisational culture. Changes in leadership, values, and priorities may alter the overall work culture, impacting how employees perceive and engage with the company. Arguably, when Bert Habetts was the new CEO, the company's culture shifted. Clear communication,

support mechanisms, and a focus on employee well-being are essential components for successfully navigating the changes brought about by a restructuring process. Although the first weeks of my internship were filled with meetings, I found these helpful to understand what challenges the company is facing. Moreover, the Executive Board tried to be open to questions and any further inconveniences that the reconstruction has caused.

On a positive note, restructuring the firm can also create opportunities for growth and development. New roles, projects, or areas of focus may emerge, providing employees with a chance to diversify their skills and contribute to the company's evolving strategy. As of January 2024, it is difficult to see the entire effect of the restructuring. However as the website *C21Media* states, in the last quarter of 2023, the ProSiebenSat.1 Group saw a notable 11% rise in its adjusted EBITDA (*Earnings before interest, taxes, depreciation and amortisation*), reaching approximately €335 million, an improvement from the €303 million of the prior year's same quarter, surpassing its earnings projections. Across the full year, the group's adjusted EBITDA was approximately €578 million, down from €678 million in 2022 (Light on the horizon for ProSiebenSat.1 as firm reveals better than expected numbers, n.d.). When I left my internship, I realised that effective communication during a restructuring is crucial, but it can be challenging. If there was any miscommunication or lack of transparent information about the reasons behind the restructuring, its impact, and the future direction of the company, it could contribute to anxiety and confusion among employees. Nevertheless, as already mentioned before, I did not realise this. Of course, there were new processes here and there that I had to get used to, but I didn't notice anything negative from my team. I can't say what it was like in other teams.

Experiencing the reconstruction of a leading multimedia company has been very insightful. I gained a multitude of impactful insights, experiences, and skills that definitely contribute to my professional and personal development. It was definitely interesting, and I am excited about the future steps of ProSiebenSat.1 and I will try to keep informed about the reconstruction.

1.4 Reflection

My internship with the social media team at ProSiebenSat.1 has been an experience that has influenced my development on both a personal and professional level. Because of the

assignments' varied nature, I was able to expand my skill set and learn more about the evolving media industry and AI.

One of the most valuable aspects of my internship was the collaborative environment within my social media team. Active participation in presentations on social media trends fostered a culture of continuous learning, sparking insightful discussions among team members. This collaborative effort not only enhances my understanding of the emerging platforms but also cultivated a sense of camaraderie that made the workplace vibrant and engaging. Even as an intern, people listened to your ideas and everyone was welcome.

The hands-on experience in content creation, from cutting clips to planning social media strategies, provided me with a holistic view of the content lifecycle. Crafting visually appealing posts in Adobe Photoshop and Illustrator; programs I have worked with in my undergraduate degree, but have had not any practice since then, showcased my creative abilities and allowed me to contribute to the digital branding of both *Frühstücksfernsehen* and *Taff*. Moreover, the programs used will definitely help me in the future since they are used at many different organisations. Being part of meetings and offering input was a positive aspect that underscored the team's commitment to inclusivity and innovation. The exchange of ideas in these sessions broadened my perspective and reinforced the value of diverse viewpoints in shaping effective strategies. Moreover, I felt part of the team, which is not always the case in big firms.

Venturing into article writing for *ProSieben* and *Sat.1* website and becoming creative in filming reels added a layer of versatility to my skill set. These experiences not only honed my creative writing and video production skills but also highlighted the adaptability required in the constantly evolving landscape of social media.

Adding to this, my supervisor gave me positive feedback for my internship, which I was thrilled with. My contribution to the team and positive energy has been refreshing and was positively recognised even by my team leader.

However, the journey was also filled with challenges, balancing the demands of multiple tasks, from content creation to community management, required a high degree of time management and organisation skills. Sometimes, this lead to stress, especially during Christmastime. Through this period, we had to keep our pages full of content because social media is always on and active. Viewers and readers need to stay informed and entertained.

On another note, I was lucky with my supervisor at the company. I had someone who I was able to ask questions, and she was the one who gave me my tasks. Moreover, on the first day I had a whole day of onboarding, which I realised is significant in a new job. On the contrary, I knew many other interns who did not have an onboarding day nor a supervisor. At the end of my internship, in the reflection interview, I noted this as a negative. Many other interns came to me and asked me for help and tasks since I was the one who was already working in the company. Nevertheless, this was not my operating range.

Another point, which I had reflected on for myself, is that I would have loved to become more part of the filming process and behind the scenes of different projects. Since ProSiebenSat.1 has their own studios for filming, I would have loved to have been involved in a film shoot or a shoot for a TV series. Above all, simply to look behind the camera and see what you can't see in front of the television.

In my reflection interview, I stated that I should have asked more and stepped out of my comfort zones. I will definitely take this with me to my next job and be more open to these opportunities. My supervisor also had a critique that I had not really learned of my small mistakes. One of these and also one of the most significant ones was: Sometimes I had to link articles from the *ProSieben* website to the Facebook page. So that the users, who use social media more, can just click on the link on Facebook and direct to the website. To just post a Link would not have made a lot of sense, so I had to create captions for these Links for Facebook. These captions always have to be plural and address the entire community. However, the article, which I had to link for Facebook, was written in singular form. It was a challenge for me to filter information from the article (to read singular) but then to reinterpret it as plural when I wrote the captions. Sometimes I made the same mistakes over and over, which was annoying for my supervisor, as she had to correct them all the time - I now realise that I need to pay more attention to criticism. Another criticism point that she expressed was that I had to focus on the importance of information in my captions. Like, for example, informing the reader in the very first sentence what the topic is and not only in the penultimate sentence. I will definitely take this into consideration in any type of text I am writing.

1.5 Contribution to studies

Deciding to do an internship at ProSiebenSat.1 within the social media team has been an invaluable complement to my studies in a Master's program focused on communication with the specialisation in media and entertainment. The experience gained has enriched my academic pursuits and provided a practical bridge between theoretical knowledge and real-world application.

One of the most significant contributions has been the opportunity to apply theoretical concepts learned in my Master's program to real-world scenarios. The content creation, social media planning, and trend analysis tasks aligned seamlessly with the academic foundation laid in courses related to media and communication strategies. The practical implementation of theories has deepened my understanding and enhanced my ability to connect academic knowledge with practical challenges.

Moreover, working at the company mentioned above has offered me unparalleled insights into the intricate dynamics of the media and entertainment industry. This hands-on experience has allowed me to witness first-hand how industry trends, audience behaviour, and technological advancements shape the strategies employed by a leading media company. Especially the focus of cross-functional collaboration within a media company, reinforcing the importance of effective communication and teamwork. This aligns closely with the interdisciplinary nature of my Master's program, emphasising the significance of collaboration between different facets of media and communication. It has provided a practical context for understanding how professionals from various backgrounds come together to achieve common goals.

Through studying, you don't get the chance to do so much practical work. The internship has been crucial for my practical skills important in the media and entertainment domain. From content creation using the Adobe programs or *Meta*, for the hands-on application of these tools has translated into a refined skill set. These practical skills are not only valuable for me in the past internship, but are also transferable assets for future roles within the media industry.

Being an active participant in social media trend presentations has allowed me to stay at the forefront of this industry. This is particularly crucial in the rapidly evolving landscape of media and entertainment. The ability to identify and adapt to emerging trends is a skill that directly contributed to my academic pursuits and positions. It will help me to be informed

and stay a forward-thinking professional. Moreover, as already mentioned above, it definitely helped me to get out of my comfort zone when presenting in front of many people – especially at university where it is necessary to present in front of your peers. Furthermore, connecting to new people, especially the ones in my Team, are not only beneficial for my current endeavours but also contribute to the broader professional landscape of my academic and career journey.

The internship has provided me with a platform for building professional relationships and expanding my network within the media industry. Engaging with professionals at ProSiebenSat.1 has opened doors to mentorship opportunities, industry insights, and potential collaborations, since I was able to even look into other work teams and areas. In one, I was able to be part of social media and marketing of the whole company. Since I am only focussing on *Frühstücksfernsehen* and *Taff* I only had these two shows to work on. The team where I had my “shadowing” (looking into other sections of the company) was bigger than mine and completely focused on shows that don’t air that often. It was really impressive how many shows have their own social media accounts. But the processes weren't really any different to those I had in the team. However, they even have more meetings and follow-ups for different series than others. Moreover, the interns and employees get much more responsibility than people out of our team.

Through the company, I was often exposed to the use of AI. It all started when I searched through pictures in Adobe Stock to use on one of the graphics for social media. I found a picture of Christmas and candles. I used that picture in my post. My Supervisor then asked me to check the photographer – as it turned out, it was generated with AI. After two, three weeks, the first deep dives developed in this field. Embarking on a captivating exploration, ProSiebenSat.1 extended a unique opportunity to look closer into the topic of Artificial Intelligence. An experience that not only broadened my horizons but also influenced my academic and professional trajectory. This led me to my current Master Thesis topic: Artificial intelligence in the media company ProSiebenSat.1.

To summarise, all my experiences and six months of working at the company ProSiebenSat.1 in Munich, Germany had been a symbiotic relationship between academic learning and practical application. It has bridged the gap between theory and practice, equipped me with tangible skills, and deepened my understanding of the media and entertainment industry. This experience is a cornerstone in my academic journey, positioning

me as a more adept and well-rounded professional in the field of communication, with a focus on media and entertainment.

Literature Review:

Chapter 2

2.1 Definition of AI

Artificial Intelligence: breaking the two words: “What is intelligence?”. Nevertheless, scientists try to focus on the intelligence of machines and that it behaves like a person, showing intelligent behaviour. The word “Artificial” has many more associations. As Wolfgang Ertel described in his book *Introduction to Artificial Intelligence*, “It brings up fears of intelligent cyborgs. It recalls images from science fiction novels. It raises whether our highest good, the soul, is something we should try to understand, model, or even reconstruct.” (Ertel, 2018, p. 1). He made it challenging to understand what the term really means however quoted one of the pioneers of AI, John McCarthy from 1955: “The goal of AI is to develop machines that behave as though they were intelligent”. More examples follow, but all these had one or two weaknesses. Elaine Rich, another technician, came up with the following definition: “Artificial intelligence is the study of how to make computers do things at which, currently, people are better.” Wolfgang Ertel explained that this definition is the most up to date and will even last for the next 50 years.

All in all, AI refers to the development of computer systems capable of performing tasks that typically require human intelligence (What is Artificial Intelligence (AI)?, n.d.).

In the media and entertainment industry, AI has made a change for companies and businesses. AI is revolutionising creative processes across industries and has become a powerful force in the game, film, and advertising industries. AI has emerged as a major player in the media and entertainment industry, driving strategic investments and serving as the cornerstone of a relentless effort to meet the ever-increasing needs of viewers.

In the dynamic realm of digital media, where every click, view, and interaction shapes the narrative of our online experiences, the symbiosis of technology and intelligence has given rise to a transformative wave. This wave means artificial intelligence, which comes into every facet of digital media, a phenomenon that is not only revolutionizing the way we consume information but also propelling the industry into an era of unprecedented growth. The landscape of media has undergone a tectonic shift. Traditional modes of content

creation, distribution, and consumption have given way to the immediacy and interactivity afforded by digital platforms. From social media networks that connect the global population to streaming services that deliver tailored content on-demand, the digital media landscape is expansive, ever evolving, and dynamic (Takyar, 2024).

In this digital era, all that matters is growth. The amount of new content, personalized experiences, and instantaneous interactions fuels an ecosystem that is in perpetual expansion. This growth is not merely quantitatively but is characterized by the qualitative evolution of user expectations, technological capabilities, and the very nature of media engagement.

One of the main components of the transformation is AI. With its capacity to decipher pattern, learn from data, and make intelligent decisions, it has become a worldwide known source to the digital media experience. From recommendation algorithms that intuitively understand user preferences to automated content creation tools that amplify creativity, AI is the catalyst that propels digital media into realms previously unimaginable.

The amalgamation of AI and digital media is not mere coexistence; it is a synergy that unlocks unprecedented possibilities. Machine learning algorithms analyse user behaviours to curate personalized content, chatbots engage in real-time conversations (Blyton, 2023).

Bringing together AI and digital media is not a mere coexistence; it is a synergy that unlocks unprecedented possibilities. Machine learning algorithms analyse user behaviours to curate personalized content, chatbots engage in real-time conversations, and predictive analytics shape strategic decisions. This relationship propels digital media beyond the realms of static engagement, transforming it into a living, adaptive entity that mirrors the dynamic nature of its audience (Blyton, 2023).

Media companies stand to gain a substantial benefit from the integration of AI across various facets of their operations. The transformative capabilities of AI open doors to efficiency, personalization and innovation. This ultimately enhances the overall performance and competitiveness of media enterprises.

Going deeper into the AI landscape, there are many different distinct forms. Since technology is evolving, AI is too, especially when it comes to traditional AI and generative AI. This first one is often referred as narrow or weak AI and tries to focus on only one task individually (Heaslip, 2023). To focus on performing a task it is using predetermined intelligence that focuses on performing present tasks using predetermined algorithms and rules. These AI programmes are designed to be particularly good at one thing or a few things,

e.g. interpreting different languages, playing chess or making medical diagnoses. Also including Siri and Alexa (Siri, from Apple and Alexa, from Amazon). (Alexa: from Amazon and works as a private intelligent assistant (Amazon, n.d.)), recommendation engines on Netflix or Amazon, or even the Google search algorithm. “These AIs have been trained to follow specific rules, do a particular job, and do it well, but they don’t create anything new”, explained Bernard Marr in the Forbes Magazine (Marr, 2023).

On the other hand, there is generative AI which is thought to be the next generation of artificial intelligence, where there is a possibility to be able to create something new. The AI generates something new from the knowledge it’s been given. Today's generative AI is capable of generating text output and also graphics, music and different computer codes. After being trained with a collection of data, generative AI models generate new data similar to the training set by recognising the underlying patterns. OpenAI's language prediction model GPT-4 is an excellent example of generative AI. It is able to produce text that is almost identical to human-written language after being trained on huge parts of the Internet (Marr, 2023).

The capabilities and applications of generative AI and classic AI differ primarily. Generative AI goes beyond traditional AI systems by producing new data that is comparable to its training data; however, traditional AI systems are mainly used to evaluate data and predict to make decisions.

Concluding, generative AI is better at generating patterns than traditional AI at recognizing patterns. While generative AI uses the same data to produce something entirely different, traditional AI can evaluate data and tell you what it found. Generative AI can provide new avenues for creativity and innovation. In the design field, generative AI can help to reduce the ideation process by creating numerous prototypes in a matter of minutes. This can be helpful in writing scripts, creating deepfakes and even creating new songs in the entertainment industry. It can write reports or articles for a newspaper. Any field where creativity and innovation are crucial could be transformed thanks to generative AI. For task-specific applications, however, traditional AI still performs excellently. Predictive analyses, recommendation engines, chatbots and many other applications are based on it. It supports most AI applications in use today, maximising productivity across a range of industries (Marr, 2023).

2.2 History of AI

Through different parts of literature, AI already got developed in Stories. *Runaround* a book by Gregory Powell and Mike Donovan, explains the “Three laws of Robotics”. Although this paper will not focus on robotics, there is still a big connection to artificial intelligence:

1. “a robot may not injure a human being or, through inaction, allow a human being to come to harm”
2. “a robot must obey the orders given to it by human beings, except where such orders would conflict with the First Law;” and
3. “a robot must protect its own existence as long as such protection does not conflict with the First or Second Laws.” (Haenlein & Kaplan, 2019, p. 6)

At about the same time, in the 1940s, the English mathematician Alan Turing was working on much less fantastical problems and created *The Bombe*, a code-breaking device for the British government that was designed to crack the Enigma code that the German Army was used during World War II. *The Bombe*, which weighed about a ton and measured about seven by six by two feet, was widely considered to be the first working electromechanical computer. *The Bombe's* remarkable method cracked the Enigma code - a feat that even the most capable human mathematicians had not achieved before. After his achievement, Turing asked himself the question of how the intelligence works on these types of computers (Haenlein & Kaplan, 2019). An article followed by Turing described the usage of intelligent machines and how to test their intelligence. When coming to the word *Artificial Intelligence* and how it evolved later on in 1956 where Marvin Minsky and John McCarthy (computer scientist) held a workshop about AI at Dartmouth college. This workshop, which kicked off the idea behind AI and was supported by the Rockefeller Foundation. It brought together those who would later be considered the founding fathers of AI, such participants included Claude Shannon, the founder of information theory, and computer scientist Nathaniel Rochester, who later developed the IBM 701, the first commercial scientific computer.

The Dartmouth Summer Research Project on Artificial Intelligence goal was to bring together scientists from various disciplines to create a new field of study focused on developing machines that can mimic human intelligence.

In two decades, there was a lot of development in the AI world. One of the most knowns was ELIZA, a natural language processor, which was able to simulate a conversation with a human. Moreover, it was one of the few programs which was able to pass the Turing Test, which is a proposed research method for demonstrating the thinking ability and intelligence of machines. After this success, politicians decided not to fund projects like this any more, a period also known as the “AI Winter” of the 1970s and 1980s.

Additionally, not enough progress has been made since the *The Bombe* and early ELIZA systems. However, each of these programs consists of a set of guidelines based on the idea that the human intellect can be reduced to a series of "if-then" statements. This way they worked perfectly - consider 1997, when Garry Kasparov, the world chess champion, was defeated by IBM's Deep Blue program. Using a technique known as tree search, Deep Blue, which could analyse 200 million possible moves per second, was able to predict the next best move by examining 20 moves in advance (Haenlein & Kaplan, 2019).

Nevertheless, this Expert System mentioned above cannot easily recognize faces or even see the difference between a picture showing a cake or a dog – some scientists even debated this, as not “real” Artificial Intelligence. Statistical methods for achieving real AI were discussed as early as the 1940s, when Canadian psychologist Donald Hebb developed a theory of learning. This is known as “Hebbian” learning, which mimics the concept of neurons in the human brain. This came into the development of research on artificial neural networks. However, this work stopped in 1969, when Marvin Minsky and Seymour Papert explained that computers did not have enough processing power to handle the work required of such artificial neural networks (Haenlein & Kaplan, 2019).

A real comeback of neural networks was in the form of Deep Learning in 2015. The programme was called AlphaGo and was developed by Google. It was able to beat the world champion in a board game named Go. This high performance was achieved by the artificial neural network called Deep Learning – which is the basis of most social media platforms like Facebook, fuel smart speakers, self-driving cars and speech recognition. This has been the start of artificial leading us to today – with OpenAI. On November 30, 2022, OpenAI released an early preview of ChatGPT. Users shared samples of their chatbot's capabilities on social media which caused ChatGPT to quickly become a technical celebrity. The range of ChatGPTs technological possibilities varied from: tales to illustrations, from organising trips to creating fables to developing computer code. The chatbot had over one million users

within 5 days (Marr, 2023). It was founded in December 2015 by Sam Altman, Greg Brockman, Elon Musk, Ilya Sutskever, Wojciech Zaremba, and John Schulman. The team established the company with the goal of developing artificial intelligence for the benefit of humanity by combining their various backgrounds in software engineering, machine learning, and technology entrepreneurship. Through different advancements, each version was built upon the prior tools. Now, standing at ChatGPT-4 – with each step forward, there will be the possibility to get closer to a time when artificial intelligence (AI) permeates every aspect of our life and improves our communication, creativity, and productivity (Marr, 2023).

2.3 Used Cases of AI

AI is being used in a wide range of industries, and its application has grown over time. The previous applications, including expert systems, natural language processing (NLP), computer vision, and gaming, have been covered in the aforementioned chapters.

Starting off with systems that offer individualized recommendations. These AI-powered recommendations, that can be seen on Netflix and Spotify, analyse user behaviour and preferences to make relevant content recommendations that increase user pleasure and engagement (Dilmegani, 2024).

Moreover, companies like Tesla and Waymo are developing self-driving cars that use AI algorithms to perceive without human intervention, revolutionizing transportation.

Adding to this are virtual assistants like Siri, Alexa and Google Assistant. These utilize AI technologies, including natural language processing and machine learning, to understand user queries and provide relevant responses, facilitating hands-free interactions and task automation (Dilmegani, 2024).

Especially in Healthcare AI Algorithms analyse medical images, such as X-Rays and MRIs, to assist healthcare professionals in diagnosing conditions more accurately and efficiently, as, for example, AI systems for detecting diabetic retinopathy. Furthermore, AI-powered fraud detection systems analyse transaction data and patterns to identify suspicious activities and prevent fraudulent transactions in banking, finance, and e-commerce, helping companies to reduce the risks and protect against financial losses.

Another important use of AI nowadays is the AI-based translation tools, such as Google Translate and Microsoft Translator, use machine learning algorithms to translate text

between multiple languages accurately and efficiently, facilitating cross-lingual communication (Dilmegani, 2024).

Additionally, AI can contribute to any kinds of sport. Through recording or taking photos during playing moves, trainers and players are able to optimise their movements through watching themselves. Trainers are then able to enhance their strategy and game preparation (Künstliche Intelligenz: Was Sie darüber wissen sollten, n.d.).

AI is changing the media landscape by improving user experience and user activity through various applications. Natural language processing, content personalization and automatic content generation accelerate information delivery and user engagement while ensuring personalised experiences. Predictive analytics, content moderation, and AI-driven image and video analytics are other tools that help maintain platform integrity and optimize content strategy. AI-powered immersive experiences, including virtual and augmented reality, also captivate audiences with interactive narratives. All of these developments suggest that AI already plays a crucial role in influencing the future of media by providing personalized, effective and immersive experiences that meet users' changing desires and interests (Takyar, LeewayHertz, 2024). To gain a better understanding, the following chapter will go into the information in more detail.

2.4 AI in the media

Through the evolution of AI, the media industry has seen a major shift recently. Many voices praise the new technology development, others are critically discussing the potential negative outcomes. Starting off with the positives, because a study discovered that newsrooms benefit from it: 70 of 101 journalists around the world see AI as a useful tool that will be especially useful in their everyday workday – this undermines the potential that generative AI has in the media industry. Moreover, 49% of the newsrooms are already actively using AI-tools – however 51% seem to be careful with their usage and handling the tools (Schmidt-Holzmann, 2023).

Content created with artificial intelligence (AI) appears more frequently in the digital world, from chatbots and virtual assistants to news articles and tailored marketing messages.

The process of using machine learning algorithms to evaluate data and create text, image, or audio content that mimics human-generated information is the fundamental component of AI-generated content. Although AI-generated content is still in its infancy,

there is a wide range of potential applications. According to some scientists, AI-generated content has the potential to completely transform the way people interact, be educated and enjoy themselves in the future (Team, 2023).

AI is reshaping and revolutionising the media industry, especially through content personalisation meaning that AI algorithms meticulously analyse user data and behaviour to curate personalised content recommendations. Streaming giants like Netflix and Amazon Prime utilize AI-driven recommendation engines to suggest movies and TV shows tailored to individual preferences, thereby enhancing user satisfaction and retention. Moreover, AI's role extends beyond the recommendation system, infiltrating content creation itself. Advances AI-powered tools enable media organisations to automate the writing of news articles, sports recaps, and financial reports. By harnessing AI-driven platforms, companies such as *The Associated Press* streamline their content production workflows, accelerating delivery and expanding coverage (Team, 2023). A joint survey of 120 journalists from newsrooms in 46 countries by the London School of Economics and the Google News Initiative found that more than 75% of respondents are already using AI for trend detection or transcription, content, personalization and many other applications. Many respondents expressed that this is changing the roles of journalists and therefore the skills in demand in newsrooms, and raised concerns about the ethical impact of AI on editorial quality and other aspects of journalism (Wie KI die Redaktionsarbeit verändert, n.d.).

NLP further evolved in time and enriched the media landscape by empowering AI system to comprehend and generate human-like language. Chatbots and virtual assistants deployed by news outlets and media entities engage with users, providing real-time responses and information. This seamless interaction is made possible by AI's ability to understand and process natural language queries effectively. Another example of this is that German radio stations are using "text-to-speech" or "text-to-video" offerings to broadcast weather and traffic reports, or to ensure greater accessibility (e.g. rbb24, Bayerischer Rundfunk, WDR, Hit Radio FFH (all big media companies in Germany in radio and television)). Templates for news videos with avatars, i.e. with artificial speakers, are currently very popular. In addition to new media agencies, software companies such as Adobe or graphic design platforms such as Canva also offer animated avatars for blogs, podcasts or news reporting (Wie KI die Redaktionsarbeit verändert, n.d.).

Furthermore, AI plays a pivotal role in image and video analysis automating tasks, such as tagging, classification and content analysis. Media organisations leverage AI-driven tools to streamline video production processes, identify relevant footage, and automate editing and captioning tasks. This enhances efficiency and stability while maintaining content quality. AI-driven content moderation tools ensure platform safety and integrity by monitoring and moderating user-generated content. These tools use AI algorithms to detect and remove offensive or inappropriate content, safeguarding user experiences and upholding community guidelines. A closer look at the practice shows that images for articles or front pages of print products are already being generated with AI, but these are by no means photorealistic images. When creating audio recordings, however, there are possibilities that primarily affect production, merging, transcription and improving sound quality (Wie KI die Redaktionsarbeit verändert, n.d.).

Moreover, AI augments immersive media experiences through technologies like Augmented Reality (AR) and Virtual Reality (VR). Media organizations leverage AI to create interactive storytelling experiences, immersive advertising campaigns, and virtual tours, captivating audiences with engaging and memorable content experiences (Team, 2023).

The next subchapters will examine the difference between the usage of AI online, in websites and in social media. Both of them are using AI to enhance user experience, specific applications, and functionalities, nevertheless, they may vary depending on the platform's objectives, audiences, and content types.

2.4.1 Using AI online and in ecommerce

AI has been revolutionising all kinds of sectors. Brands use AI for various aspects of their companies, from the financial to the technological to the retail sectors. Moreover, other companies can hold conversations with their target audiences – the impact of AI in all sectors is profound. Speech interpretations, judgement and sensory perceptions are all traditionally human-intelligent jobs that are now being performed by machines or computer networks. Artificial Intelligence (AI) is paving the way for hyper-personalization through the development of machine learning. This includes personalized product recommendations, intelligent content recommendations, and customer assistance. It is transforming the way

Internet companies connect with prospective clients (The rising importance of AI in boosting the efficiency of online advertising in developing countries, 2023).

Many companies have now implemented different ways of using AI, to improve ecommerce or their interactions with their customers. A company attempting to enhance e-commerce search is Clarifai, a US-based software-Start-up. Early research by Clarifai concentrated on the visual components of search; according to the company's website, its software is "artificial intelligence with a vision." Through sophisticated image and video recognition, the company empowers developers to create smarter apps that "see the world like you do," enabling businesses to create a customer-centric experience. By labelling elements of the image or video, the AI software uses machine learning to automatically classify, organize, and visually search content. Developers and companies of any size or budget can access AI technology, which provides organizations with a competitive advantage. One excellent example is the most recent version of Pinterest's Chrome extension, which allows users to highlight an object in any web photo and then request that Pinterest utilize image recognition technology to find related goods. But these companies were not the only to have introduced themselves to AI. Also, shopping websites include innovative visuals search capabilities. Just like finding matching products for shoppers. Customers discover complementary products which are similar to their own product they are just looking at, whether it is the same size, colour, shape or brand (Eclipse, 2023).

AI has already made its appearance in the music business by creating musical compositions. It is currently poised to transform the way that people watch TV. PwC's Entertainment and Media Outlook said that by 2021, the US media market can reach up to \$759 billion (Ballhaus, Chow, & Rivet, 2023). COVID-19 has accelerated this uptake, with more consumers turning on their streaming services while staying at home due to the restrictions. The multinational mass media and entertainment conglomerate Warner Bros is not the only media giant who started to use the technology to manage films and budgets.

That AI has been supporting the workers is no longer a myth, now it can also filter fake news. Due to the development of fake news, it is especially hard for consumers to identify fact from fiction. However, deep learning tools can now be included to identify and fact check Fake News as seen in the Google's 2017 Search Algorithm upgrade. This serves as an example, as it was designed to combat the spread of hate speech and false information. In parallel, researchers at the University of Michigan developed an AI system that can detect

false news reports with 76% accuracy. Using this method, websites are fed into an intelligent algorithm that determines the most believable versions of the articles based on an analysis of the websites' sources. Through constant learning, the algorithm's accuracy increases as more websites are added to its collection. This technology, while not perfect, is a positive step in the fight against false information. Especially for online websites and news outlets which only work online, it is a helpful tool to stay reliable.

Additional tools such as *Verbit's* automated speech recognition (ASR) technology, which offers transcripts of every word said during tapings of shows and interviews, can be utilized by media producers. By acting as legal recordings of the interviews, these transcripts reduce the possibility of future legal action, particularly regarding adherence to Federal Communications Commission (FCC) rules (Chazen, n.d.).

Broadcasters are constantly looking for ways to improve efficiency and reduce costs. Automation of news production has emerged as the newest approach to this endeavour, a trend that lowers costs while increasing audience.

The term "automated journalism" refers to the practice of journalists using artificial intelligence (AI) in various media production processes. This allows them to make and distribute media with unprecedented ease, as well as collect material and interpret data pools. Large-scale story production is done by algorithms; structured data on sports events and earnings, for example, is converted into news texts with little to no human intervention.

AI also makes it easier to customize how news is being delivered. Platforms can identify user preferences and provide more engaging content thanks to machine learning. Additionally, breaking news is sent straight to customers' mobile device lock screens via this technology, increasing accessibility and promptness (Chazen, n.d.).

2.4.2 AI in Social Media

Today, media platforms facilitate human connection and connectivity in the modern period, building interactions between individuals and groups. Written press, radio, and television are examples of traditional social media; Facebook, Twitter, Instagram, Pinterest, and YouTube are examples of current social networking platforms. Social media has become a ubiquitous phenomenon in today's global culture, enabling people to connect with each other through the constant usage of mobile devices. Artificial intelligence now plays a

fundamental role in various use cases that gives the functionality of social media platforms. (Kaput, 2024).

AI creates content based on predetermined rules, using datasets such as match summaries to generate narratives around the data. This approach significantly accelerates report development, allowing companies to save time and resources while redirecting employee focus towards more critical tasks. However, despite the apparent growth in AI-generated content, a significant challenge remains: computers lack the ability to react autonomously. AI heavily relies on human intervention, as it lacks awareness of human emotions. Therefore, even if aspects such as humour are incorporated into its rules, machines may struggle to accurately interpret and replicate human sentiments (Kreimer, 2018). Moreover, the scope of AI-generated content remains limited due to these constraints, especially in tasks such as match reporting or disseminating basic information, such as financial reports, activity updates, or real-time inventory overviews for companies.

However, the platforms such as Instagram, Twitter, LinkedIn, Pinterest and Facebook use artificial intelligence to develop a wider community, increase their following or their reach. This section provides examples of how social media platforms use AI, according to (Sadiku M. , Ashaolu, Ajayi-Majebi, & Musa, 2021, p. 16):

1) *Facebook*: This social media programme encompasses content recommendations, facial recognition, friend suggestions, and targeted advertising driven by advanced machine learning. The language remains clear, objective, and value-neutral, employing a formal register and on-point wording. The text follows a conventional structure and formatting, with consistent use of citations and footnotes. Its structure is logical and balanced, demonstrating causal links between statements. The text is free from grammatical, spelling, and punctuation errors, with no modifications made to the content. Facebook employs various AI tools to enhance the user experience for each individual, making it more user attractive.

2) *Instagram*: uses AI to identify and suggest visuals and images. This is particularly evident on its Explore page.

3) *Snapchat*: uses AI technology, specifically computer vision, to apply filters to faces in real-time.

4) *LinkedIn*: AI recommends connections, job vacancies, and posts in users' feeds, as well as providing connection suggestions, targeted posts, and job recommendations.

5) *Pinterest*: also utilises AI to offer personalised recommendations to users. Pinterest users appreciate the platform's personalised content. Pinterest Lens allows users to search for related items by taking photos instead of entering keywords.

These applications have not changed but rather optimised in the past years since AI has been developed further.

In order to better meet consumer expectations, marketers have been forced to adopt new techniques for quickly analysing the massive amount of data that is being generated. These days, time restrictions pose a greater problem than a lack of data or processing tools because Internet users want their requests to be processed immediately and without delay - they seek instant satisfaction. In just five years, Internet users' attention spans have shrunk from 90 seconds to just 30 seconds, according to Kotler et al. (2017). As a result, the company that can reach the consumer with its offering first is more likely to draw their attention. But grabbing and holding users' attention is a difficult task in a time when digital interactions are short and attention spans are getting shorter. Although this might have been a challenge for the past few years, artificial intelligence has proven to make the task possible (Sadiku, Ashaolu, Ajayi-Majebi, & Musa, 2021). Owing to the numerous options it offers, handling massive amounts of data has become incredibly simple, creating new channels for marketing to quickly and accurately target every Internet user. YouTube also uses AI in the form of content recommendation systems, based on the user's looking and searching on the platform (Benabdelouahed & Dakouan, 2020).

Facebook is already taking advantage with the tools through recognising faces in photos and is able to bring up advertisements again for products users have recently looked at. Social media includes sites like Facebook, Instagram, Pinterest, LinkedIn, Twitter, and more. It's a big area where marketers can use AI to improve efficiency and performance. Businesses are using AI more to maximize how well they use social media. Data about users' social media activity is continuously collected and evaluated with AI's help. This analysis, frequently with sophisticated big-data analytic methods, allows the inference of social behaviours and the detection of trends.

AI became a key component of the popular social media networks consumers use every day. Certain types of social media creations and management aspects can be handled in seconds through AI. However, the new technology can be seen in different forms on the social media platforms (Kennedy, Kunkel, & Funk, 2021).

Starting off with Chatbots, which have been described by IBM as “a program that simulates human conversation with an end user.” (What is a Chatbot?, n.d.) Most of the chatbots who use AI, are increasingly equipped with conversational AI techniques such as NLP, so they can understand the question of the user and are able to answer these (What is a Chatbot?, n.d.). The integration of a chatbot in a company, humanize a conversation and became important for the customer experience. Moreover, the technology is able to provide opportunities to develop the customer integration process while optimizing the cost of customer service (Benabdelouahed & Dakouan, 2020).

Furthermore, chatbots use user interactions and data provide customised suggestions. They increase user engagement and conversions by making appropriate product, service, or content suggestions based on analysis of preferences, past purchases, and browsing behaviour. Additionally, chatbots are effective instruments for generating leads. They qualify leads, get user information, and route them to the right sales or marketing channels for additional nurturing through interactive discussions.

A source from an interest group explained that Chatbots “hold the potential to become a technology for *social good*.” That means, chatbots may have been developed for the purpose of having a beneficial impact on society” (Følstad, et al., 2018). As when it comes to Twitter, they have been experimenting with LLM Chatbots. The Large Language Model Chatbots allows “them to recognize patterns in language and identify the most relevant information in a query, allowing them to generate responses that are specific to the individual user’s needs” (Benabdelouahed & Dakouan, 2020). Using the power of LLM Chatbots, anyone may create tweets that are tailored to their unique needs. These bots make it easier to create tweets on certain subjects, using exact wording and hashtags to increase exposure to a wider audience. These bots enable users to customise tweets according to their tastes by providing them with a variety of options and alternatives for tweet production. Tweets may also be used for author and text analysis, offering insights on language trends and messaging tactics. One big benefit of using an LLM Chatbot on Twitter, or even any other social media platform, is that it may act as a customer care agent for a company. This means that a significant amount of time and effort may be saved since the bot will automatically respond to client questions via tweets. The LLM Chatbot may also interact with followers in a variety of ways, such as by answering questions and wishing them a happy birthday. These kinds of interactions improve consumer loyalty and brand engagement.

However, even if chatbots have been through a large-scale of technological advances, they cannot replace humans. This is because their role is too limited to work on core tasks – which enables teams to work on something different and even creative. Moreover, chatbots will need updating and regular maintenance. To run a chatbot, IT, marketing development, customer service and many more teams must work together to allow a tool that allows solving the key problems of customers (Benabdelouahed & Dakouan, 2020). Nevertheless, chatbots on social media represent the smooth use of AI technology to improve user experience, optimise workflows, and propel corporate expansion in the digital era and also support the teams with the workload.

Another interesting AI Tool for social media is predictive analytics. It is more than 70 years old, since mathematical formulas have existed for more than almost a century (Kennedy, Kunkel, & Funk, 2021).

It offers a powerful tool for businesses to anticipate user behaviour, trends, and preferences with greater accuracy. AI algorithms try to utilize to gather and analyse vast amounts of data from social media platforms. This data includes user interactions, engagement metrics, demographic information, and content preferences. Moreover, it identifies patterns and correlations within the data, uncovering insights that might now be immediately apparent to human analysts. These patterns can relate to user behaviour, such as the types of content they engage with, the times they are most active on social media, and their purchasing tendencies. Once patterns are identified, predictive models are built using machine learning techniques. These models use historical data to predict future outcomes, such as user engagement levels, campaign performance, or customer churn rates. Additionally, it can be especially helpful for targeted marketing. When armed with predictive insights, businesses can tailor their marketing strategies to target specific audience segments more effectively. One example could be that it can help identify which types of content are most likely to resonate with particular user groups, enabling marketers to craft more personalized and relevant social media campaigns.

Furthermore, through predictive analytics there can be an enhanced customer relationship management (CRM) on social media. By analysing user data and engagement patterns, businesses can identify high-value customers, anticipate their needs, and provide personalized support or offers to enhance loyalty and retention.

As to Marketing, CRM and modelling, there are also tools for predictive analytics that can help businesses mitigate risks associated with social media activities. AI algorithms can flag potential PR crises or negative sentiment trends early on, allowing businesses to take proactive measures to address issues before they escalate. One might say that businesses are gaining more in-depth insights into user behaviour, make data-driven decisions, and optimize their social media strategies for greater success (Benabdelouahed & Dakouan, 2020).

As to AI-generated content, which is becoming increasingly prevalent in everyday experiences the emergence of machine learning, especially deep learning, has brought about a significant shift in content generation. (Goodfellow, et al., 2017) introduced Generative Adversarial Networks (GANs) in 2014, which ushered in a new era where machines could produce images that were often indistinguishable from real ones. This technology also gave rise to deepfakes, which allowed for the creation of hyperrealistic but entirely fabricated video content. For example, the film industry has begun to utilise these tools for de-aging actors, as demonstrated in films such as *The Irishman*.

Chatbots, powered by AI models such as GPT-3, are now being used to assist with customer service inquiries, draft emails, and even write news articles. Additionally, virtual worlds, like those found in the video game *No Man's Sky*, use procedural generation techniques to create vast, explorable universes that are unique to each player. On the commercial side, brands use AI to create targeted advertising campaigns that generate content tailored to individual consumers.

However, there have also been malicious uses of AI, such as deepfakes in politics, which spread misinformation, disinformation and undermine trust in public figures. The development of AI technologies has also brought significant positive changes, but it has also created numerous challenges and threats that affect ethical, socio-political, and technological dimensions. The pitfalls of AI-generated content are complex and multifaceted, ranging from the spread of falsehoods to the infringement of personal identities (Wang, 2023). These challenges will further be addressed in another chapter.

Social selling is a strategic approach that uses AI-powered tools and technologies to enhance sales efforts on social media platforms. The capabilities of AI enable sales professionals to gain valuable insights into customer behaviour, preferences and buying patterns by analysing vast amounts of data from social media interactions. AI can help sales

teams personalise their engagement with prospects by delivering targeted messages and content that resonate with individual needs and interests. In addition, AI streamlines lead generation processes by automatically identifying and qualifying leads based on pre-defined criteria, allowing sales teams to focus their efforts on high-potential prospects. AI-powered sales enablement platforms provide real-time insights and recommendations to optimise sales strategies. Social listening tools monitor social media conversations to identify relevant opportunities and proactively engage with prospects. Predictive analytics, also powered by AI, help sales teams forecast future sales trends, identify risks and make data-driven decisions. This ultimately drives revenue growth through personalised engagement and data-driven insights (Benabdelouahed & Dakouan, 2020). Social selling goes beyond simple prospecting; it is about nurturing relationships and actively listening to customers to offer solutions that address their immediate needs and simplify their lives. Artificial intelligence (AI) technology, along with tools such as chatbots, play a critical role in the success of social selling efforts. By leveraging these technologies, companies can streamline the sales process, optimise their digital strategies on social networks, and enhance the collection of valuable customer profiles - a primary objective for companies looking to maximise their online presence and engagement (McLachlan, 2024).

2.5 Content Recommendation System

Recommender Systems have become a significant research topic due to their ability to analyse user preferences and provide tailored recommendations. With the increase in e-commerce activity, there is a growing need to filter through the multitude of products available online and meet customer demands for personalized item suggestions. Recommender systems adeptly serve this purpose by predicting user preferences and facilitating the discovery of items that align with individual interests. Breaking it down, a recommender system serves as a personalization technique designed to assist users in discovering products or information across various domains, including videos, songs, e-commerce items, and movies. By assessing individual profiles and reference attributes, it gauges a user's preference for items they have not yet explored (Sinha & Dhanalakshmi, 2019).

Recommender systems have received considerable attention due to the growth of e-commerce, which has led to an increasing demand for personalised product

recommendations. Companies such as YouTube, Amazon, MovieLens, and Netflix use these systems to analyse user preferences and boost sales by providing tailored suggestions. Collaborative filtering is one of the most widely used techniques among recommender systems, dating back to its inception in the 1990s. This approach uses algorithms, such as those developed by Sarwar et al. and Liu et al., to predict user ratings based on the preferences of similar users. They have demonstrated enhanced accuracy, particularly with datasets such as *MovieLens*. These systems operate within the realm of collaborative filtering and rely on historical data to generate recommendations that cater to individual user needs and preferences, (Aljunid & D H, 2019).

Through the enormous growth of websites, filled with new documents, new ideas and new products, the amount of information that people receive is overwhelming. Through this, the recommender system has been introduced in the 1970s by Elaine Rich, which was called *Grundy*. This system was designed to recommend books based on users preferences classified into stereotypes. This was followed by other early systems like the “digital bookshelf” described in 1990 at Columbia University and implemented at scale by various researchers. These early systems laid the foundation for content-based filtering, which recommends items by comparing the content of the items to user profile, focusing on item features such as text in articles or metadata in movies (Dong, Wang, Xu, Tang, & Wen, 2022). Then, collaborative filtering emerged as a significant shift from content-based on the past behaviour of users in the system, identifying patterns of similarity among users and items without requiring item content analysis. It includes user-user and item-item collaborative filtering, dealing with challenges like the cold start problem, scalability and sparsity (Meserole, 2022). After these, knowledge based and demographic systems recommend items based on explicit knowledge about users and items, or demographic information, providing alternatives when historical data is limited. Whereas modern recommendation systems and big data have transformed recommendation system, enabling scalability and the processing of vast amounts of data from diverse sources. Platforms like Hadoop and Spark have become fundamental to handling large-scale recommendation tasks, utilising parallel computing and sophisticated data processing frameworks to manage and analyse structured, semi-structured, and unstructured data (A Survey on Modern Recommendation System based on Big Data, n.d.).

Over time, algorithms have been developed for different recommendation approaches, including matrix factorization for collaborative filtering and deep learning models for more nuanced understanding and prediction of user preferences. These advancements address previous challenges like sparsity and scalability while improving the accuracy and personalisation of recommendations (Sharma & Singh, 2016).

The field of recommendation system or recommender systems is still evolving and has turned into its own study field. Investigating this field has led to positive contributions for a smoothly running service. Amazon, Instagram and YouTube have been relying on the feature for a long time. Through the time, recommender systems have been developed to fit into the people's needs and do the consumers' justice, which can be seen in the three different stages of recommender system (Yuan, 2023). These are as follows according to (Sinha & Dhanalakshmi, 2019, p. 1048) which also referred to as web 1.0, web 2.0 and web 3.0 recommender system. Here are the different generations of recommender Systems:

- 1) The first-tier recommender system, focuses on the e-commerce domain. It employs content-based, collaborative-based, and hybrid-based filtering techniques to aid in the decision-making process. Additionally, neighbourhood approaches are used to make collaborative decisions when recommending items.

- 2) To address the constraints of the initial-tier recommender system, the second-tier incorporated social information. This inclusion of social data enabled the system to curate a user portfolio, which recommendation models could then consult to identify similar users.

- 3) The third-tier recommender system constructs a knowledge-based model that considers factors such as geographical locations, as well as psychological and emotional elements.

The main aim of the recommender system is to increase e-commerce sales by leveraging available data. To achieve this, it uses techniques such as clustering, neighbour-based methods, and pattern formation. One way to identify patterns in sales records is through association rule mining. The system considers various types of data inputs, including statistical, behavioural, rating, transactional, and production data. The choice of data inputs relies on the particular context in which the recommender system is implemented.

The evolution of content recommendation systems in social media has significantly leveraged big data analytics and advanced computing frameworks. Techniques like Apache Mahout, a machine learning library that has a collection of libraries and algorithms for data processing, analysis, and optimization. It utilizes machine learning methods to address intricate business challenges by offering analytics capabilities for processing extensive datasets. It is a free and open-source initiative, is developed on top of Apache Hadoop and Apache Spark, aiming to equip enterprises and organizations with data processing and analytical tools for handling big data. These technologies have enabled analysis of vast amounts of social media data in a distributed manner, addressing challenges such as scalability and the cold start problem. Collaborative filtering remains a core strategy, evolving through hybrid models that integrate user ratings, demographic information, and item features to enhance recommendation quality. These developments reflect towards more sophisticated, scalable, and personalised recommendation systems in the social media landscape (Hu, Zhang, Wang, & Li, 2012).

The advent of AI in content recommendation has drastically altered online content discovery and consumption. Initially, recommendations were based on simple algorithms, offering basic predictions. Now, AI-driven systems provide sophisticated, precise suggestions by analysing extensive data on user behaviour and preferences, including viewing history, search queries, and social media activity. This enables highly personalized content recommendations, significantly enhancing user engagement.

Content recommendation systems are categorised into collaborative and content-based filtering. Collaborative filtering analyses user behaviour in comparison with others to suggest similar interests. It examines user activities like viewing patterns, searches, and ratings to offer recommendations mirroring those of similar users. For instance, someone who is interested in fashion trends receives content and influencers shows users with similar viewing histories and their content.

Whereas content-based filtering recommends based on content characteristics like genre. AI plays a crucial role by processing vast data, learning from user behaviour, and predicting future preferences. This method matches user preferences with content attributes, offering suggestions for similar items. These systems aim to enhance user engagement by offering personalised content recommendations, with ongoing advancements promising more refined user experiences. For example, viewers of drama movies might get

recommendations for other films in the same genre, based on shared themes or characteristics, enhancing the personalisation of content suggestions (Team A. , 2023).

Going deeper into the topic, many studies have been made on content recommendation systems. One of them presents a framework for an adaptive recommendation system in social media, focusing on news recommendation by leveraging both the original news postings and the comments from readers to identify relevant and balanced information. It highlights the use of textual and structural information from comments to capture dynamic user interests and concerns, employing a novel graph-based method for extracting topical patterns. Experimental evaluations demonstrate the system's effectiveness in recommending news with improved precision and novelty by integrating comments, outperforming traditional methods that rely solely on news content or comments. Key results include higher precision and novelty scores when both news content and comments are utilized, indicating a significant improvement over using either source alone. The study suggests that incorporating user interactions, specifically comments, can greatly enhance the recommendation quality in social media contexts (Hu, Zhang, Wang, & Li, 2012).

2.6 The role of AI in Content Personalisation & user engagement

Content personalisation refers “to the use of machine learning algorithms or other intelligent technologies to analyse vast amounts of customer data and create personalised content that is tailored to the interests and preferences of individual users” (Team A. , 2023). The personalised content can include: everything from product recommendations and targeted ads to personalised emails and website content. This is useful for improving the overall customer journey, which will benefit the customers' satisfaction, loyalty, and ultimately, higher profits for businesses (Team A. , 2023).

As a report stated by *InsiderIntelligence* most consumers want brands to personalize their communications. According to the *Salesforce Report*, 73% percent of respondents expect companies to understand their unique needs and expectations, and 62% think companies should anticipate their needs (Frankland, 2022). Almost 90% of participants are inclined to appreciate receiving offers personalised to their preferences and past browsing or purchase activities, according to a *Merkle* study from February (Merkle, 2022). Similarly, a comparable percentage of consumers are open to sharing additional information following a favourable interaction with a brand. Particularly, consumers show a higher readiness to

disclose personal details in exchange for customised offers or products specifically designed to match their interests (Merkle, 2022).

The integration of AI-driven personalisation into social media has been found to significantly improve user engagement. This is achieved by ensuring that the content users encounter resonates with their interests and behaviours. Through the level of customisation, it enriches the user experience and aids in content discovery, allowing users to navigate through the vast digital space more efficiently. AI can assist users in discovering new topics, creators, and communities that are in line with their preferences, thereby enhancing the overall social media experience (The impact of personalized social media marketing on your website traffic and conversions, 2023).

Furthermore, content personalisation extends to dynamic ad targeting, where social media platforms can utilize AI algorithms to analyse user data and provide highly targeted and relevant ads. This not only has the potential to enhance the effectiveness of advertising campaigns, but it can also improve the user experience by reducing the likelihood of encountering irrelevant ads. However, it is important to note that the benefits of content personalisation and AI are accompanied by a set of privacy and ethical considerations. The collection and analysis of personal data, which are essential for personalisation, raise concerns about user privacy, data security, and consent. Therefore, social media platforms must navigate these complex issues with care, striving to balance the advantages of personalisation with the imperative of maintaining user trust and adhering to regulatory requirements.

The adaptive nature of AI plays a crucial role in continually refining content personalization. AI systems can evolve based on user feedback and changing behaviours, ensuring personalization efforts remain accurate and relevant over time.

However, it is important to acknowledge that content personalisation and AI in social media face challenges. The constant evolution of technology and changing user expectations require ongoing innovation and vigilance to address potential issues such as echo chambers, where users may only be exposed to viewpoints similar to their own, or filter bubbles, which can limit the diversity of content encountered (The impact of personalized social media marketing on your website traffic and conversions, 2023).

The article “Measuring the impact of online Personalisation: Past, Present, and Future” (Zanker, Rook, & Jannach, 2019, S. 160-168) provides a comprehensive analysis of the

evolution and current state of online personalisation of several disciplines, including machine learning (ML), human-computer interaction (HCI), and cognitive psychology. It outlines how these fields have contributed to the development of personalisation technologies that adapt content and interactions based on user preferences, behaviours and interactions. Moreover, it discusses the evolution of online personalisation from its original focus on enhancing system usability and adaptability to the development of advanced algorithms that aim to predict user preferences with high accuracy. It acknowledges the multidisciplinary nature of research in this area, drawing on insights from AI, ML, HCI, and cognitive psychology to create systems that can effectively offer tailored content to users.

The paper identifies the main challenges in online personalization, including privacy concerns, ethical implications of algorithmic decision-making, and the need for transparency in the age of General Data Protection Regulation (GDPR). The GDPR is a regulation by the European Union (EU) and sets guidelines for the collection and processing of personal information from individuals who live in the EU. These are the points which are included in the regulation (Regulation (EU) 2016/679 of the European Parliament and of the Council, 2016):

- Principles for data management and rights of the individual
- Aims to enhance privacy and protection
- Addresses the transfer of personal data outside of the EU and EEA areas

However, there have been recent developments in this field. In March 2024, the parliament adopted the Artificial Intelligence Act which aims to safeguard the fundamental rights, democracy and the law. Moreover, it supports environmental sustainability from high-risk AI applications. Furthermore, innovations continue to be supported. The regulation is necessary to lower the potential risks and the level of impact that it has (*Artificial Intelligence Act: MEPs adopt landmark law*, n.d.).

Further research is required to explore these issues, particularly the balance between leveraging user data for personalization and respecting user privacy and autonomy.

The industry perspective on personalisation is seen as a critical tool for enhancing user engagement, satisfaction and ultimately, business metrics like sales and conversion rates. Cognitive science perspectives provide insights into the psychological underpinnings of personalisation, such as the similarity-attraction effect, which could inform the design of more effective personalisation strategies. The Article also suggests that for an integrated

approach to personalisation research that combines the strengths of ML, HCI, and cognitive psychology, the approach would not aim at enhancing the technical aspects of personalisation but also consider the user experience, ethical considerations, and the broader societal impacts of these technologies (Zanker, Rook, & Jannach, 2019, S. 160-168).

Another article investigates the utilization of Twitter by European journalists for news reporting, with a particular emphasis on the customization of content and its potential to create divisions within media systems (Pablo, Vaccari, & Valeriani, 2017). It investigates the correlation between journalists' use of social media for self-promotion, editorialising of news, and the influence on media polarisation and fragmentation throughout Europe. The research suggests that there are differences in journalistic practices across nations, which are influenced by varying degrees of media political parallelism. It also indicates that the customization of news on social media may lead to a more divided public sphere, which could impact the reporting and interpretation of domestic and European politics. According to the study, there is a chance that the way journalists utilise social media for news reporting, particularly when it comes to personalising information on sites like Twitter, will split and disintegrate European media networks. The study indicates that variations in the degree of media political parallelism have an impact on how journalists use social media in their reporting across different nations. There have been suggestions that personalisation might lead to more polarisation in the public arena, which could then affect the conversation surrounding national and European politics (Pablo, Vaccari, & Valeriani, 2017).

The articles state how using AI is being used to personalise material on social media platforms, and it has been proved to increase user engagement by catered to individual tastes. It is noteworthy, although, that these studies also draw attention to the possible drawbacks of personalisation, including polarisation in the media and privacy issues. For instance, the polarisation of the European media system is affected by journalists' usage of Twitter for customised news reporting. To preserve a positive digital environment that protects user privacy and fosters diversity of thought, this study highlights the significance of ethical issues when using AI for personalisation.

2.7 Ethical consideration

AI raises many questions concerning privacy, bias and discrimination, documentation and lack of transparency, job displacement and the manipulation of human behaviour. It is

developing at a rapid pace, which presents important ethical issues about its use, regulation, and wider social repercussions. It is crucial to include engineers, ethicists, and legislators in the discussion, creating and management of AI's influence in order to negotiate these complications, including questions of dominance and governance. The White House's recent \$140 million investment and policy guidelines are an attempt to allay these worries and appropriately utilise AI's potential, stated the *Capitol Technology University* (n.d.).

Focusing first on the ethical considerations for AI in general, technologies which have AI seem not to recognise humans in all their races and genders perpetuates societal biases. It can invade privacy and make decisions without accountability. Displacement in work or in general counts as an economic inequality. Furthermore, the ability to change human made decisions without the consumer knowing, that it has been manipulated by an AI, is a concerning challenge (Siau & Wang, 2020).

AI systems, trained on vast data sets, often embed societal biases, potentially perpetuating discrimination in key areas like hiring, lending, and justice. For example, an AI used for screening job applicants might inherit historical biases from the data it was trained on, leading to unfair outcomes. U.S. agencies have issued warnings and are taking steps to combat AI bias, emphasizing accountability for organizations using AI tools. These systems often lack transparency, making it difficult to understand their decision-making processes. This is a particular concern in critical areas like healthcare and autonomous vehicles, where knowing how decisions are made is crucial. Ensuring accountability, especially when errors occur, is vital. Researchers are developing explainable AI to address these challenges, aiming to improve fairness, accuracy, and reduce bias.

From autonomous vehicles, to AI-powered autonomous weapons include accountability, misuse risks, and losing human oversight on critical decisions. Addressing this requires international regulations for responsible use. Ethical AI deployment demands collaboration across fields, robust regulations, transparency, diversity, and inclusivity in development, plus ongoing dialogues to ensure AI's potential is harnessed ethically, shaping a future where AI is deployed responsibly (Ryan, 2020).

In the Arts sector, where Ownership and commercial rights of AI-generated art remain unclear, raising questions about copyright and infringement. This issue is increasingly

pertinent as AI outpaces regulatory frameworks. Clarification from lawmakers on these rights is essential to navigate the evolving landscape of digital art creation through AI.

Facing the possibility to have vacuuming robots at home or helpers at work, people automatically imply robots more in the daily life. However, how are the consumers sure that the responsibilities of their tasks relate to other ethical responsibilities to society in general? Also AI's advancements may replace certain jobs, potentially increasing unemployment and economic inequalities. However, it's also argued that AI could generate more jobs than it eliminates. Addressing job displacement necessitates retraining programs, policies for a just transition, and comprehensive social and economic support for affected workers (The ethical Considerations of Artificial Intelligence, n.d.).

The article by E. Burton et al. (2017, S. 22-34) explains the importance of integrating ethical considerations into AI education, focusing on the complex ethical questions raised by AI technologies in the society. Moreover, the article gives recommendations with necessities of building AI systems with ethical considerations from the ground up, rather than adding them as an afterthought.

Buolamwini and Gebru (2018) stated that there are significant biases in commercial AI systems used for gender classifications, such as in face recognition. These systems exhibit higher error rates for darker-skinned and female subjects, showcasing a lack of intersectional accuracy. This work underscores the importance of including diverse datasets in AI training processes to limit biases and ensure fairness and accuracy across different demographics and races.

Transitioning to the ethical dimensions within social media, the discourse begins with an examination of social manipulation and the dissemination of misinformation.

AI algorithms can be exploited to spread misinformation, influencing public opinion and deepening social divides. Technologies like deepfakes, which create realistic but fake audiovisual content, pose threats to political stability. For an effective vigilance, countermeasures are essential to combat these issues.

The article from Stamatis Karnouskos "Artificial intelligence in Digital Media: The Era of Deepfakes" (2020) states that emergence and implications of deepfakes in digital media, emphasizing their role in creating realistic yet fabricated content which can significantly impact society. It explores deepfakes from multiple perspectives, including media and society, law and regulation, and politics. Deepfakes pose challenges to verifying the

authenticity of digital content, potentially undermining public trust and spreading misinformation. The article highlights the need for a multifaceted approach to address deepfakes, involving technology, regulation, and education to mitigate their negative effects and leverage their potential responsibly.

Moving onto privacy and security concerns regarding AI, because of AI's effectiveness depends on large personal data volumes it raises privacy and human rights concerns. The use of technologies like facial recognition for extensive surveillance, especially in contexts about people with Asian heritage, has sparked debates on discrimination and repression, as already mentioned above. Ensuring privacy in AI necessitates strong safeguards against data breaches and unauthorized sensitive information access (Karnouskos, 2020).

Thilo Hagendorff (2020, p. 102) made an overview of AI ethics guidelines (Figure 1) and the different issues they cover. The author explicitly stated: "In Table 1, I only inserted green markers if the corresponding issues were explicitly discussed in one or more paragraphs. Isolated mentions without further explanations were not considered, unless the analysed guideline is so short that it consists entirely of brief mentions altogether." To summarise the important facts of this table, which reviews 22 major AI ethics guidelines, where the most common themes are accountability, privacy, fairness, and the lack of detailed technical guidance. The table suggests that while AI ethics often emphasize deontological rules, there's a need for a virtue ethics approach that focuses on moral character and situation-specific deliberations among technologists. This approach aims to foster ethical decision-making beyond mere compliance with universal principles, advocating for the cultivation of techno moral virtues within the AI development community. The table includes entries from different organizations, indicating their coverage of key ethical issues. The table also shows whether specific issues like the future of employment, public awareness, and human autonomy are addressed. Green shading indicates the presence of guidelines on a particular issue by an organization. Counts at the bottom display how often these issues are mentioned across all guidelines, suggesting common concerns and priorities in AI ethics.

	Peña et al. (2018)	Holten et al. (2016)	Beijing Academy of Artificial Intelligence (2019)	OECD Recommendation of the Council on Artificial Intelligence	EU High Level Expert Group on AI (2020)	Organization for Economic Cooperation and Development (2019)	Brundage et al. (2018)	Floridi et al. (2018)	Future of Life Institute (2017)	Crawford et al. (2016)	Campolo et al. (2017)	Whittaker et al. (2018)	Crawford et al. (2019)	Dziukopolski et al.	Abrams et al. (2018)	OpenAI (2018)	The IEEE Global Initiative on Ethics of Autonomous and Intelligent Systems (2016)	The IEEE Global Initiative on Ethics of Autonomous and Intelligent Systems (2016)	Information Technology Industry Council (2017)	Microsoft Corporation (2016)	DeepMind	Google (2018)	Cutler et al. (2018)	Partnership on AI (2018)
number of sections																								
Privacy on AI																								
Artificial intelligence as a tool																								
Emerging Ethics for Artificial Intelligence																								
AI principles of the EU																								
AI principles of the US																								
AI principles of China																								
AI principles of the OECD																								
analysis of abuse scenarios of AI																								
meta-analysis about principles for the beneficial use of AI																								
large collection of different principles																								
statements on social implications of AI																								
statements on social implications of AI																								
statements on social implications of AI																								
statements on social implications of AI																								
principles of the FAT and community																								
code of ethics released by the Université de Montréal																								
several short principles for the ethical use of AI																								
detailed description of ethical aspects in the context of AI																								
detailed description of ethical aspects in the context of AI																								
brief guideline about basic ethical principles																								
short list of keywords for the ethical use of AI																								
several short principles for the ethical use of AI																								
several short principles for the ethical use of AI																								
IBM's short list of keywords for the ethical use of AI																								
principles of an association between several industry leaders																								
privacy protection																								18
fairness, non-discrimination, justice																								18
accountability																								17
transparency, openness																								16
safety, cybersecurity																								16
common good, sustainability, well-being																								16
human oversight, control, auditing																								12
solidarity, inclusion, social cohesion																								11
explainability, interpretability																								10
science-policy link																								10
legislative framework, legal status of AI systems																								10
future of employment/worker rights																								9
responsible/intensified research funding																								8
public awareness, education about AI and its risks																								8
dual-use problem, military, AI arms race																								8
field-specific deliberations (health, military, mobility etc.)																								8
human autonomy																								7
diversity in the field of AI																								7
certification for AI products																								4
protection of whistleblowers																								3
cultural differences in the ethically aligned design of AI systems																								2
hidden costs (bias/discrimination, content moderation, energy, resources)																								2
notes on technical implementations	yes, but very few	none	none	none	yes	none	none	none	none	none	none	none	none	none	none	none	none	none	none	none	none	none	none	none
proportion of women among authors (f/m)	(8/10)	(2/3)	ns	ns	(5/21)	(5/8)	ns	(4/2)	(3/1)	(6/4)	(12/4)	(12/12)	(8/10)	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	(55/77)
length (number of words)	16546	22787	766	3289	84017	8609	646	11530	18273	25759	38920	1359	4754	441	40015	108092	2272	75	417	882	4488	1481		
affiliation (government, industry, science)	government	government	science	government	science	science	science	science	science	science	science	science	science	non-profit	industry	industry	industry	industry	industry	industry	industry	industry	industry	industry
number of ethical aspects	9	12	13	12	8	14	12	13	9	12	13	5	11	4	14	18	9	6	6	6	6	6	6	8

Figure 1: Various AI Ethics Guidelines (Hagendorff, 2020, p. 102)

Since there are so many concerns, many of which have not been deeply explored, yet it is safe to say that through the fast development of AI technology there have to be regulations, rules and guidelines, to navigate the ethical and moral issues posed by AI technologies. Keng Siau and Weiyu Wang (Siau & Wang, 2020, S. 74-87) emphasize the collaboration among various stakeholders, including technologists, policymakers, and ethicists, to develop and implement strategies for ethical AI deployment, highlighting the complexity of building AI systems that behave ethically and the critical nature of this endeavour for the future of humanity.

2.8 Gaps in Existing Literature

Through extensive research, the gaps of existing literature regarding artificial intelligence are present and span through various aspects of the field, reflecting its complexity and rapid evolution. While AI has seen significant advancements and widespread applications, certain areas remain underexplored or present challenges that the current body

of research has not fully addresses. This can also be because the topic is relatively new and has just been explored. There is some research about these gaps in AI, however, the research article by Filippo Santoni de Sio and Giulio Mecacci described the “responsibility gap” and how to address these gaps. Moreover, they explain their idea of designing sociotechnical systems for “meaningful human control” – meaning that systems align with the relevant human reason and capacities (2021, p. 1060).

As already mentioned before, artificial intelligence does not seem to integrate all people in their unique ways. So, insights from humanities, social sciences, and ethical studies have not been fully fulfilled. This includes a deeper exploration of AI’s societal impacts, ethical considerations, and the human-AI interaction from a psychological and sociological perspective. Besides, while there is a growing awareness and research into bias in AI systems, comprehensive methodologies for detecting, understanding, and mitigating biases across diverse datasets and applications are lacking. This extends to exploring the root causes of biases and their long-term societal implications.

Moreover, despite the importance of explainable AI for trust and accountability, there's a need for more effective methods and standards for making complex AI models transparent and understandable to users, stakeholders, and regulators. Adding to this, the literature often focuses on immediate or direct risks associated with AI, with less attention given to long-term, systematic risks, including the potential for significant job displacement, security threats, and challenges to democratic processes.

Especially in complex, creative, or highly skilled tasks, humans and new technologies must try to work together or humans must be given the option to now work with AI at all. This includes the understanding of the potential for AI to augment human capabilities without replacing human roles.

As stated above, there are ethical considerations that have to be thought of while working with AI. There is a gap in comprehensive frameworks of AI for governance that address ethical considerations, regulatory compliance, and the balance between innovation and public welfare. This includes international cooperation on AI standards and norms. Addressing all of these mentioned above it requires multidisciplinary collaboration, innovative research approaches, and a commitment to exploring the broader implications of AI technologies on society, ethics and the global community (De Sio & Mecacci, 2021).

Chapter 3:

AI in ProSiebenSat.1

3.1 Used cases of AI in the media company

Artificial Intelligence (AI) stands as a pivotal subject shaping the future. It is crucial for businesses to harness this potential, especially at ProSiebenSat.1. The company employs cutting-edge technologies to expand their audience and enhance the monetization of their content. The solution for the use of AI is that it solves problems, supports with the workload of the employees and to give them more room for creative thinking. Moreover, there has to be a responsible use of AI technologies to work in sync. The use of AI in the company should support the qualitative goals for solutions and high-quality content to increase the reach (ProSiebenSat.1 Media SE - Künstliche Intelligenz made by ProSiebenSat.1., n.d.).

As the authors of the study “Areas of application and use cases of Artificial intelligence in the value chain of the ten largest media companies Germany” (Willbold, Eisenbeis, & Ciepluch , 2023) state that when examining the application of individual technologies, Bertelsmann, ARD, ProSiebenSat.1 and Axel Springer (all German media companies) emerge as the frontrunners in terms of the breadth of used cases of artificial intelligence. However, the variety of technologies must also be considered. Across 13 distinct technologies, ProSiebenSat.1 leads with the adoption of eleven different technologies, showcasing the widest array of AI technology usage. This positions ProSiebenSat.1 at the forefront of AI technology diversity, with the aforementioned companies each incorporating eight different technologies.

Different Teams such as the technology teams and the specialized departments at ProSiebenSat.1. Tech Solutions work together to create diverse application areas of artificial intelligence. These come from different specialized departments and work together hand in hand with peers, all engaged in the production, distribution, or monetization of content through multiple channels. To facilitate this collaboration, the AI Products team has created five proprietary automation tools, spanning marketing and automated solution for video, imagery, and audio. These initiatives highlight the current utilization of artificial intelligence within ProSiebenSat.1.

It is important to note that the source for this section comes exclusively from the ProSiebenSat.1 website as this might be the most reliable one (ProSiebenSat.1 Media SE - Künstliche Intelligenz made by ProSiebenSat.1., n.d.).

Starting off with the Digital Buzzroom of Seven.One Entertainment Group, which enables more output in less time. It is a digital video editorial department that produces daily news clips. In 2019, the first try of AI was implemented in the Buzzroom: an AI technology should translate German videos into English and into Dutch, however this failed. Employees had to check these translated videos and were faster than the AI themselves (Kaess, 2024).

Furthermore, AI started to produce fully automated videos. The goal was to rise the output with the least possible human intervention. One example was the peak of the COVID-19 pandemic, where the news coverage was extensive and the infection rates in German federal states significantly influenced the daily routines, ProSiebenSat.1 leveraged a data-driven tool. The tool enables, the production of customised, standardised text, crafted by an editor, which encapsulated the latest figures from the Robert Koch Institute (which is a federal institute within the portfolio of the Federal Ministry of Health (RKI - Institut, n.d.). An algorithm then updated this text daily based on the newest data, automatically refreshing the content to produce 16 unique clips about infection rates each day, all without manual intervention. These automated clips, once created, were distributed across a wide array of publisher websites, including those leading newspapers. This strategy not only allowed the company to generate a high volume of content and broaden the audience for these videos but also enabled our editorial team to allocate their time more effectively and efficiently.

The second automation product that the tech teams have created is automated tagging, which makes keywording simpler. Since the ProSiebenSat.1 produced loads of multimedia content every day – including an enormous amount of moving images and video footage, it is essential to find the content in the media documentation centre. In this centre, colleagues meticulously record the contributions of the editorial teams, detailing their observations in written form. Traditionally, the media documentarians have indexed broadcast material manually daily, identifying visible elements, the essence of each clip, and information within scenes deemed significant enough for reuse. For example, when documenting a one-hour TV report, which consumes several hours of manual effort. For this the media documentarians collaborated with the AI products team to create a solution that augments the manual archiving process with artificial intelligence.

This AI-approach automatically generates keywords or tags to catalogue their content, utilizing a technique known as video mining. This technique involves the automated extraction of information from video content. For this, the AI Products team integrated the specifically developed ICON platform (“Intelligence Content) into the media documentation system. The ICON platform aggregates various services, including object, celebrity and voice recognition.

To guarantee the accuracy and relevance of these tags, ProSiebenSat.1 also implemented an intelligent, automated post-editing process. This acts as an additional review stage, eliminating irrelevant or inaccurate tags. This process ensures the reliability of the automated tagging, allowing for the seamless incorporation of these tags into the media documentation database. Consequently, this automation significantly reduces the time editors need to spend on documentation. To guarantee the accuracy and relevance of these tags, the company has also implemented an intelligent, automated post-editing process. This acts as an additional review stage, eliminating irrelevant or inaccurate tags. This process ensures the reliability of the automated tagging, allowing for the seamless incorporation of these tags into the media documentation database. Consequently, this automation significantly reduces the time editors need to spend on documentation.

Adding more to key wording content, is transcribing. This helps to find statements and topics quickly. Transcribing became a crucial step in making it more accessible and searchable by machines. They allow for a swift identification and processing of specific topics within raw footage, significantly aiding in the retrieval of sequences during editing and improving collaboration between editors and cutters.

The company, has streamlined AI in this previously time-consuming takes. Historically, the editors devoted considerable effort to manually transcribing content. In a pilot project with the editorial team from *Abenteuer Leben am Sonntag* (Adventure Life on Sunday – a TV series), the AI products team introduced a solution that enables editors to instantly request transcripts of raw footage with a simple click.

This allows the editors and cutters not only to review materials comprehensively and coordinate more efficiently, but also operates in real-time with the videos' duration, entirely in the background. Not to forget, that manually transcribing an hour of spoken content typically requires between three and six hours.

Targeting consumers is employed by companies to distribute tailored content to a specific audience, guided by their interests, preferences, and behaviours. This AI technique enhances the ability to accurately identify, segment, and engage users across both online platforms and television. This allows the advertising partners to more effectively reach their desired audience, thereby enhancing the appeal of the ad spaces.

The AI products team have been collaborating closely with the sales experts team at Seven.One Media to develop sophisticated targeting solutions. A critical step in this process is pre-defining the target audience for advertising campaigns and ensuring they are reachable when the ads are aired. The AI-driven profile-based targeting is set to significantly improve how the users engage on addressable TV in the future. This technology can target real-time TV-commercials on internet-connected devices, allowing for highly personalised ads that reach specific audiences with greater precision. To categorize viewers into distinct groups, a machine learning model examines the TV viewing patterns of known demographics. This model is also applied to new users to infer their likely demographic group. The insights gained enable the company to accurately match various TV devices to specific viewer profiles, ensuring that advertising campaigns are delivered to the most appropriate audiences. This approach minimizes wastage and optimizes the use of the advertisers' budgets by targeting more efficiently.

Furthermore, The *MediaLytics* tool, developed by ProSiebenSat.1's AI Products team in collaboration with the Performance Marketing & Attribution unit, measures the immediate impact of TV advertisements on website traffic. By continuously monitoring website visits, it can determine the baseline traffic and identify increases following TV spots, attributing these surges to specific advertisements. This allows for a comprehensive analysis that combines TV reach with digital performance metrics, providing clients with transparent evaluations of their advertising effectiveness.

All of these five tools mentioned above are used in different areas of application and have different effects, however, they all have a collective benefit for ProSiebenSat.1. These improve the reach to the audience through daily premium content and enhance content monetization through sales division. Not to mention, the fact that the employees have less work to do and can therefore focus on other things (ProSiebenSat.1 Media SE - Künstliche Intelligenz made by ProSiebenSat.1., n.d.).

3.2 Tools

ProSiebenSat.1 has many used cases for using artificial intelligence in the everyday life's. This following Figure shows the in general used and specific AI-Technologies used in the ten biggest media companies in Germany, featuring ProSiebenSat.1. The original figure is in German, which is why this has been translated:

	Artificial Intelligence	Machine Learning	Deep Learning	Natural Networks	Computer Vision	Image Recognition	Natural Language Processing	Chatbots	Voice Assistance	SR	Speech-to-text processes	Text-to-Speech processes	RPA	Sum of use and application cases	Number of different technologies
ARD	5	1	0	3	0	1	0	0	4	6	3	2	0	25	8
Bertelsmann	11	6	0	1	0	0	1	0	2	3	1	1	0	26	8
ZDF	4	1	1	0	0	0	1	0	1	1	1	0	0	10	7
Axel Springer	7	8	1	1	0	0	3	0	1	0	0	1	1	23	8
ProSiebenSat.1	7	6	2	1	1	0	2	1	1	1	1	1	0	24	11
Burda	4	2	0	0	0	1	1	0	1	0	0	1	0	10	6
Medien Union	2	1	0	1	0	0	2	0	0	0	0	0	0	6	4
Funke	4	3	0	0	0	0	4	1	0	0	0	1	0	13	5
Bauer	3	1	1	0	0	1	0	0	0	0	0	0	0	6	4
Ströer	9	1	1	0	0	2	0	0	1	0	0	0	0	14	2
Total use of the technology	56	30	6	7	1	5	14	2	11	11	6	7	1		
Share of use of the technology (n=152)	37%	20%	4%	5%	1%	3%	9%	1%	7%	7%	4%	5%	1%		
Number of companies using the corresponding technology	10	10	6	5	2	4	8	3	7	4	4	6	2		

Figure 2: General and specific AI technologies in the primary value chain of the ten largest media companies in Germany (companies: n=10, cases of AI use: n=106), (Willbold, Eisenbeis, & Ciepluch, 2023).

As seen on Figure 2, machine learning and artificial intelligence are used most frequently. In the primary value chain of the ten largest German media companies, the most frequently used AI technologies are NLP (14 mentions or 9%), voice assistance and speech recognition (11 mentions or 7%). Chatbots, on the other hand, are only used very rarely (2 mentions or 1%). The most commonly used technologies in the mentioned companies are natural language processing and voice assistants, which are used by eight and seven of the ten companies respectively, apart from general AI and machine learning technologies.

Combining ProSiebenSat.1, Bertelsmann, Axel Springer and ARD, it appears that these media companies are the best equipped. The findings from the analysis of the value chain stages are combined with the analysis of the different AI technologies. This readiness manifests itself in the widespread use in different stages of the value chain (as reflected in the number of value chain stages influenced by each company) and in the diversity of AI technologies used (which includes both general and specific AI technologies). (Willbold, Eisenbeis, & Ciepluch , 2023).



*Figure 3: Cover of the AI-generated cover of the podcast “Gebrüder Glitch”
(ProSiebenSat.1, 2023)*

Furthermore, ProSiebenSat.1, in partnership with Microsoft, created an AI-driven neural voice named “Conrad” for a fairy tale Podcast (Figure 3). This is to address the scarcity of digital editors skilled in voiceovers during non-standard hours, such as nights and weekends. This innovative solution effectively reduced staff shortages, and “Conrad” continues to be operational today (Kaess, 2024). Spotify, a music and podcast platform app, explained the Podcast as this: “In this unique AI-generated podcast, fairy tales are interwoven with contemporary history in a fascinating way. Content, characters, voices, cover - the artificial intelligence is controlling this podcast. What does it sound like when the Tooth Fairy saves Black Friday from the evil Father Christmas together with Karl Marx?...” (ProSiebenSat.1 Media SE, 2023)

Moreover, ProSiebenSat.1 and RTL (another big media company in Germany) have cooperated about AI-based advertisements. This is called Ad-tech, which encompasses both software and hardware, spanning the entire advertising ecosystem, including digital booking platforms for buyers and sellers, databases, ad servers for distributing ads, and metrics to evaluate ad performance. Through their recent collaboration, ProSiebenSat.1 and RTL aim to bridge the gap with American giants in size and technology. As the article from the website “Handelsblatt” states: “It is no coincidence that TV broadcasters in Germany are joining forces right now. This is because they need to invest in artificial intelligence (AI) to address the audience in a more personalised way in the future.” As of right now, it is still difficult to say how Ad-Tech will affect ProSiebenSat.1 (Hofer, 2024).

A presentation about the channel “Newstime” by ProSieben outlines the applications of AI in the Digital newsroom, focusing on text generation, research assistance, and image generation. The key points of the presentation include (Presentation will be attached and will be seen under Figure 4):

1. Text Generation:

- a. AI-generated SEO (Search Engine Optimization) texts based on dpa reports, videos (Glomex), and Open Media.
- b. The conclusion for AI-generated SEO texts is that they have underperformed, due to being restricted by Google and require a high revision time

2. Research Assistance

- a. The tool mentioned for research assistance is perplexity.ai (which is like Chatgpt)

3. Image Generation

- a. The use of the “fotor” (an App) generated AI-generated pictures.

Moreover, the presentation also suggests a cautious approach when using AI for SEO texts. Due to its current limitations in performance and the high effort needed for revision.

Chapter 4:

Methodology

4.1 Research Design

4.1.1. Empirical Context

This research is focusing on the question: ‘How does the integration of Artificial Intelligence impact user engagement and satisfaction in online platforms in a large media company like ProSieben Sat1?’. Doing an internship in this company provided an insight into how artificial intelligence has been correctly used and has enabled this research with important information. Studying the topic of artificial intelligence is relevant since it is reshaping communication, internally and externally of a company. Moreover, it contributes to commercial and informational material for the public. With AI, mass personalisation and satisfaction of the users has been reshaped. This opens up different and new opportunities for companies and entrepreneurs; however, the substantial personalisation and targeting opportunities to some now align with ethics. This investigation will draw first-hand insights from industry professionals and direct feedback from the platform’s users, providing a grounded understanding of AI’s role in media consumption behaviour within a large media company’s ecosystem.

To answer the research question mentioned above, a mixed method approach will be used.

4.1.2 Objectives

To implement objectives to a study since it is fundamental for several reasons that affect the overall quality, direction and impact of the research. They provide a direction for the research since the research needs to discover, examine and even establish a roadmap for the entire study. Moreover, the objectives dictate the researcher on how the study should be carried out. As this research is a mixed method approach, the research design, tools and techniques were determined through the objectives. They ensure this research addresses the specific gaps in knowledge or contribute new insights to existing literature. This relevance of this study can show whether the findings contribute to academic or practical contexts.

Without the objectives, it is difficult to draw meaningful conclusions or even validate the research findings (Surg, 2010).

The objectives of this research include the impact of AI on user engagement. To investigate the influence of AI on user behaviour, such as time spent on the platform and interaction rates, to understand how AI technologies engage with users. The next objective for this study is to find out about the user satisfaction with AI features – especially when determine user’s level of satisfaction with AI-driven functionalities, like content personalisation and recommendation systems, highlighting areas of success and need for improvement.

Moreover, we will analyse expert perspectives on AI and the user experience, by collecting insights from industry experts on the benefits and challenges of AI in media platforms. This is for providing a professional contact with user feedback and engagement metrics.

4.2 Data Collection Methods

Using a mixed method approach in general is useful since, offers a robust framework for research by integrating the strengths of both qualitative and quantitative methods. Especially this combination with interviews and survey enhances the depth and breadth of analysis, leading to more comprehensive insights.

A mixed method approach is appropriate because triangulating interviews with experts and surveys with the users of artificial intelligence, it is possible to validate findings across different sources of data, enhancing the reliability and depth of the conclusions. Finding a correlation between expert insights and user experiences can strengthen conclusions about the effectiveness of AI applications, providing a solid foundation for recommendations and future strategies. The mixed method approach provides a more holistic view of how different stakeholders perceive and are affected by AI, leading to more informed, effective, and strategic decision-making.

4.2.1 Interviews

The qualitative approach used is a semi-structured interview, which will be conducted with six experts, all working in the field of either artificial intelligence or social media, in the company of ProSiebenSat.1. These experts have been chosen based on their specific

knowledge and experience that relates to the research question from different backgrounds and enhance the different viewpoints, which will contribute to the reliability of the findings. Through the different interviews, similar themes and no new significant data has surfaced, indicating that the number was sufficient. It is still important to say that the plan was to interview ten people, but it turned out that the number of interviewees (six at that time) were enough for this research – nonetheless this will be a limitation which will be discussed in the Limitations Chapter.

Interviews were chosen because it is the most efficient method to gain expert insights. Conducting an unstructured interview is the most flexible way to proceed more spontaneously on the participant's previous answers. Moreover, it is open-ended and gives a detailed overview of the topic. All the participants received the same questionnaire, how to maintain a consistency, which is crucial for comparing and synthesizing data accurately. The questions were sent out beforehand, so the interviewees could prepare for these thoroughly or even ask for lesser questions. Some participants were unable to answer some questions because they work in other areas and do not know things like key figures, user data, etc. This is also mentioned below in the discussion. The insights from these interviews are intended to provide a granular understanding of the practical applications of AI in media, complementing the broader survey findings and enhancing the overall richness of the thesis.

The interviews are conducted in a two-week period, from the 8th of April until the 17th of April 2024. The contact with the experts came mainly through the various presentations within the company, during the internship. Also asking around in different teams and gaining insights to the people working at the AI team of the company has been a help. After the experts did some of the presentations themselves, they were contacted via Microsoft Teams with the internship E-Mail and asked if they would like to participate as an expert for this research. A reminder email was then sent again in March, including the questions and the declaration of consent, which is attached in the Appendix 1.

The dates were then made official on Microsoft Teams, with an invitation for the meeting, the set time for these dates was 45 minutes. However, most interviews were around 20–30 minutes long. The interviews were recorded with an I-phone and also recorded and transcribed automatically with a video on Teams. These are seen in Figure B in the Appendix (9). Moreover, highlighting the key statements of the interviews, there have been some written notes too. There were no precise guidelines for the interviews besides the

questionnaire. It was a semi-structured interview where questions were asked occasionally that had not been prepared, just because sometimes questions arise from a conversation and can be crucial to understand the meaning of a statement being made by the participant. If a participant wanted to add something important, this person was allowed to do so. Moreover, if an interviewee was not able or not allowed (due to privacy policies) to answer a question, the question was skipped.

The questionnaire contains four overall topics with eleven questions all around. The questions were carefully selected and informed by the existing literature, other questionnaires and close collaboration with the supervisor of this study. The questions are found in Appendix 4.

The semi-structured interviews have several key thematic areas. Starting off with their current position and field of activity in the company. Then they were asked about the Understanding of AI implementation. Within this section, there was an overview of the AI implementation. Experts were asked to describe the primary ways AI has been integrated into their platforms and to identify the areas where AI adoption has been the most significant. The strategic goals discuss the strategic objectives behind AI integration and how these objectives serve the broader goals of enhancing user engagement and satisfaction.

The next section discusses the impact on user engagement which include the user behaviour insights, where the interview seeks to understand changes in user behaviour and engagement directly attributable to AI technologies. Under this section, content personalisation effects has been added, where the experts discuss how AI-driven personalisation has affected user engagement metrics and the criteria for measuring the success of these strategies. Furthermore, the conversation explores changes in how users interact with the platforms, particularly looking at session duration and frequency. Moving onto the impact on user satisfaction, where Feedback and Satisfaction metrics were asked, the challenges and solutions with the encounter of AI and the user's trust to AI concerning privacy and negative perceptions. The next section of the interview questions the future directions and ethical considerations. The experts are asked about upcoming AI projects and their expected impact on user engagement and satisfaction. Moreover, the conversation covers ethical considerations and governance in AI deployment within ProSiebenSat.1. While the literature touches on ethical concerns and the potential for job displacement due to AI, the interviews are able to provide a real-world perspective on how these challenges

are being addressed within the company. For example, the focus on privacy and data protection as mentioned by interviewees highlights ongoing efforts to integrate AI responsibly. The last section seeks to compare ProSiebenSat.1's AI usage with industry standards and extract lessons learned or best practices regarding the industry's benchmarking. Moreover, the discussion ended with the questions about how AI impacts broader business outcomes such as revenue, market share, and brand perception.

After transcribing them with Microsoft Teams, it was important to look over the transcripts closely again. Since the tools are not 100% accurate or perfect because a spoken interview can be interrupted, misinterpreted by the tool somehow miswritten a word, the transcripts were checked for mistakes. After monitoring these interviews, the transcripts were ready. The tool *MAXQDA*, has been tested out for transcription or decoding, nevertheless, since working closely with the supervisor it was not necessary to use the tool, although it could have been sufficient. After this was agreed with the supervisor, categorisations were settled for the six interviews. One could say that Philip Mayring's principle was followed, as seven categories were created to differentiate the six interviews or to group them into equal segments. The categories are

1. Use of AI, Future
2. User Engagement/Behaviour,
3. Negative implication by AI
4. Challenges
5. Ethics
6. Competition

Philipp Mayring is a German psychologist, sociologist and educator and has been a Professor of Psychological Methodology at the Alpen-Adria-Universität Klagenfurt in Austria since 2002. His approach to a qualitative content analysis is a systematic, rule-guided method. Through this research methodology, researchers can analyse textual data in a step-by-step process. This method has been developed by the psychologist in the 1980s (*Qualitative Inhaltsanalyse – Auswertungsverfahren nach Mayring – Methoden: Grundlagen der empirischen Sozialforschung.*, n.d.). This method is used in research projects which include, transcripts of open interviews, focus groups, surveys and many others (Mayring & Fenzl, 2019).

This method is not carried out exactly step by step, as this is not necessary after it has been agreed with the supervisor, but since categorisations have been used, it is still important to mention the Mayring method. These categorisations make it somewhat easier to filter key statements. The most important statements were marked with a colour depending on the category. This will reveal the experts' views on artificial intelligence and their insights on user engagement and satisfaction.

4.2.2 Participants

The participants in the interviews are introduced in the following paragraph:

1) Teresa Gunsch: working at ProSiebenSat.1 for over six months at the channel *Newstime*. Her Bachelor Thesis consists of a study regarding Artificial intelligence in the media industry. She has been at *Newstime* and focusing especially on artificial intelligence in that sector. Although she is quite new at the company, she is able to put a younger perspective on the change that is now happening in the media, into the company. Teresa Gunsch was valuable for the research since she has explicit insight into *Newstime*, a news programme which has many forms of AI in their work. Since her Bachelor Thesis has evolved around the topic AI, so it was helpful to get her opinion about the comparison of the past of AI and her vision for AI integrations in general, not only focusing on ProSiebenSat.

2) Vice President of AI at ProSiebenSat.1 (partially anonymised): Since six years, he has been working at ProSiebenSat.1. Starting off as Senior Project Manager at AI Products and now is Vice President (VP) of AI Products. Choosing him as one of my experts has gained a lot of insight into the topic with details and an understanding that only his position is able to have. This person was chosen because he has comprehensive knowledge about the strategic integration of AI technologies within the company. His position enables expert insights on both the technological and strategic aspects of AI implementation, including challenges, advancements, and future directions. Interviewing him in such a key position provides understanding of the decision-making processes regarding AI investments and projects. This can reveal the company's priorities, ethical consideration, and long-term goals related to AI.

3) Christian Braunsberger: He has been in the entertainment industry for over 10 years and went from Director at WWE (World Wrestling Entertainment) to VP of Social Media at the Seven.One Entertainment Group (ProSiebenSat.1) and has been there for the past three

years. His insights will gain a greater overview of his opinion on artificial intelligence together with social media. Since Online and social media are mentioned in my research question, it will be critical to get an insight from this side too. His side of social media was really useful for this study because he is from a special flat, where this thesis also takes up a lot of focus. His in-depth industry knowledge will have an extensive understanding of the social media landscape within the context of a large media company. His insights into current trends, platform dynamics, and user behaviours can provide valuable context for how AI is applied in these areas.

4) Junior Online Content Manager (partially anonymised): She has been working as a Junior Online Content Manager from 2018, which links the side of social- and online area well, to her job now as a Product Manager for AI Products, at ProSiebenSat.1. Getting an insight into the technological side, with even her thoughts and opinions on AI, the users and data is interesting and insightful. Her knowledge about AI, the use and forms and the best way to the contribution it is for the company is helpful and needed for this investigation. Her direct involvement in the development, management and refinement of AI products is helpful. Her detailed knowledge about specific tools and applications that the company uses. This allows her to provide in-depth information about the technical aspects, functionalities, and real-world applications of AI within the organisation.

5) Associate Director in Marketing and Creation (partially anonymised): She has been part of the media industry since 2008 and has been working for Amazon, PR work and has been at ProSiebenSat.1 for about 7 years now. Starting off as a Strategic Marketing Manager and became in 2022 the Associate Director in Marketing and Creation. She is in the Team of Strategy and Innovation, which will connect the future use of artificial Intelligence and the future innovations for employees and users. Her role for this study is that she is deeply involved in the strategy and implementation of AI technologies across social media channels. She can provide details on specific AI tools and applications used – for instance, content personalisation algorithms, automated moderation systems, or targeted advertising technologies – and how these tools have impacted user engagement and content strategy.

6) Nicolas Ebner: As a student and software developer, he has great insight of the more technical side of artificial intelligence. Working as a software developer for over two years has given him valuable insight of artificial technology use in a small company and a bigger one, like ProSiebenSat.1. In the mentioned company he is part of the ‘Gen AI Playground’

a software created just like ChatGPT. 'Gen AI Playground' is only available for employees and has been integrated in the company since November 2023. This is to test out how Artificial Intelligence can be implemented in the daily work and how much of a contribution it is for the company. As he specially focused on the Gen AI Playground, it was useful to get technology insights from him for the study. Since the Playground is one of the first AI technologies implemented in the media company, it is really useful to get to know more about it from his viewpoints. His focus has always been technology, and he always wanted to go deeper into AI.

These six interviewees all agreed to do the interview, however, the VP of AI Products does not want to be mentioned by name.

4.2.3 Survey

Doing a mixed method approach combines a quantitative and a qualitative research. Combining an interview and a survey will give a richer detail to the conclusions and findings. Moreover, it will give the results more credibility. This section outlines the survey methodology used in the research design and provides clarity on how the survey contributes to the overall thesis objectives.

The survey is focused on investigating the impact of Artificial Intelligence (AI) on user engagement and satisfaction within online platforms, including websites and social media. This study specifically examines user interactions and satisfaction levels with large media companies, with an emphasis on, but not limited to, ProSiebenSat.1.

It is conducted will be published for the public. It will ask the user about the use of artificial intelligence and its satisfaction and engagement with the technological tool. This method is useful to get a view from purely the user and will increase the knowledge about artificial intelligence in general. When the two methods, interviews and surveys, are brought together, you get an expert perspective and the user perspective.

The survey was conducted on the tool *Google Forms* as it is a free tool to use, and is even evaluated in various charts at the end when the answers are done. This choice was made due to its accessibility, ease of use, and the ability to efficiently gather and analyse data from a potentially large number of respondents.

The method mentioned above was used between the 22nd of April until the 1st of May. So there is enough time for the questionnaire to be answered by participants. The survey

obtained 78 participants. Normally, 50-80 are necessary for the questionnaire to be valid, so the criteria were met. Moreover, with the number of participants the survey is exploratory meaning, that the researcher can understand the trend of AI easily and 78 participants provide useful insights. Nevertheless, there is a limitation with the number of participants because the conclusions can be even more precise. Of course, to minimise the risks of limitations, the survey has been well-structured, starting off with an introduction and the option to cancel the survey directly. It has been divided into four categories and includes a total of 19 questions, all starting with a small introduction. The survey takes approx. 10–15 minutes.

The survey contains different types of answers. Sometimes there are multiple choice answers or there are open questions. This mix gives the researcher the chance to have unity in the questions to facilitate the evaluation⁹

The target audience for this research is at least 18 years old and above, since there will be questions involving the German media company ProSiebenSat.1. However, all nationalities can participate in the Survey –, nevertheless, participants who are not from Germany are not able to do the part about the media company ProSiebenSat.1. The research is crafted to elicit insights into several key areas. The first section asks the participants general questions about their age, social media use and the introduction to artificial intelligence. These questions help categorise the respondents by demographic and digital activity level, providing context for understanding different engagement patterns and preferences among diverse user groups. Following this section is the use of AI, where the questions in this category are designed to understand how AI is being utilised on the platforms and the awareness of users about this integration. This is because knowing users are aware of AI and to what extent they understand it helps gauge how informed the audience is, which can influence their perceptions and acceptance of AI technologies.

Moreover, also focusing on the impact on the user, to gather data on how the users feel with the AI influence. By asking the respondents about the use of AI tools in various context (work, travel, study) the survey assesses the penetration and practical impact of AI in everyday life, which is crucial for understanding baseline engagement. Moreover, the questions about the awareness and effectiveness of personalisation are vital, as they directly react to how AI is being used to tailor user experiences on digital platforms. Understanding if users notice and value these personalisation helps measure AI's effectiveness in enhancing user satisfaction and engagement. Furthermore, it seeks out if AI-driven personalisation

effectively aids users in discovering content that interests them, a direct indicator of enhanced user engagement.

Moving onto the section of satisfaction and trust, and measuring the user's overall contentment with AI on the platforms, providing a direct metric of AI's success in improving user experience. Trust is a crucial factor in the adoption and satisfaction with AI features. This question helps to understand if the recommendations made by AI are seen as credible and useful by the users. Talking about the concern about privacy and data protection it is essential to ask this, given the significant data processing involved in AI personalisation, understanding user concern about privacy is essential to address potential barriers to AI adoption.

Coming to the next category, which is about ProSiebenSat.1 the user is aware of the media company. If the participants are not German, they will be transferred to one section down. Specific questions address user experiences with AI implementations by the media company, seeking to isolate company-specific-feedback. These questions help link the user's general AI engagement with their specific interactions with ProSiebenSat.1 platforms. It assesses whether users are aware of and responsive to the AI efforts made by the company. Specifically targets user trust in AI applications by ProSiebenSat.1, which can be a critical factor in overall platform satisfaction and loyalty.

The next section is about the Future of AI, which is the final segment and gauges user expectations and concerns regarding the future developments of AI in media platforms. The survey is designed to be both comprehensive and succinct to maximise response rates while ensuring the collection of relevant data for substantial analysis. The responses will be instrumental in understanding current user engagement and forecasting future trends in the integration of AI within digital media platforms. This information is critical to the thesis, as it is contributing to a broader understanding of the strategic importance of AI in enhancing user experience and satisfaction. It allows for additional comments or concerns, giving respondents a chance to express nuanced views or issues not covered by multiple-choice questions.

Each of these questions are carefully crafted to gather data that will provide insights into how AI influences user engagement and satisfaction, particularly in the context of a large media company like ProSiebenSat.1. This approach ensures that the research can generate comprehensive, actionable findings that reflect the real-world impact of AI on users.

Chapter 5:

Presentation of the Results

5.1 Presenting the Interviews

After transcribing the interviews, it involves a careful approach to present the results and to ensure that the data is communicated clearly and accurately. After coding through the six categories, the interviews show various results.

Starting off with the interview of Nicolas Ebner which described the implementation of AI in his sector. As he was part of the AI Playground (an internal platform introduced in June 2023, which is used like ChatGPT) he predominantly worked on making AI models like ChatGPT to make them more accessible and user-friendly for employees. Setting the emphasis on privacy. The strategic objectives which the company had from his point of view was to enhance content creation efficiency by automating repetitive tasks and enabling creativity that wasn't possible before, using AI for generating images and texts. Moreover, an increase in productivity and output from fewer personnel was noted as a significant efficiency gain for the company.

Moving onto user engagement and satisfaction, where from November to April there was a consistent rise in user adoption, indicating the growing interest. Monthly user statistics showed a continuous growth, with about 300 weekly recurring users by April, out of approximately 1,400 who tried the service. He highlighted the widespread adoption of AI tools within the company, noting "From November to April, we've seen a steady increase in adoption, with about 300 weekly active users from around 1,400 who've tried the service" – describing the new tool "GenAI Playground", which works just like ChatGPT. The challenges for Ebner included addressing the diverse experience levels among employees. Moreover, he emphasized AI's role in boosting productivity, particularly through automation, stating "We can increase productivity and output with fewer personnel." The goal was to make the platform user-friendly for all, balancing the needs of AI experts and novices alike. Furthermore, moving onto the topic of privacy and trust there are significant measures taken to ensure that user data input into AI models remained confidential and was not misused, complying with privacy regulations. As this interview was the first one, it directly displayed that all other interviews will also go beyond the literature by providing

specific examples of AI's impact on internal processes and user engagement metrics. Ebner mentioned the use of AI in user analytics and its role in increasing productivity and output with fewer personnel provides a concrete measure of AI's impact on operational efficiency.

The interview of the associate director in marketing and creation focuses on her area, which is on strategy and innovation at the company ProSiebenSat1, she explained that AI is extensively used in Marketing and Advertising, where she described that AI is revolutionising marketing effort “we use AI to automate the creation of promotional materials and to enhance the personalisation of advertising”. Moreover, for automating the creation of promotional materials, resizing banners, and generating creative ideas (idea gardening) based on user prompts and briefings. The Quality restoration of poor audio and video materials for use in trailers and social clips was highlighted as a new capability enabled by AI. The strategic goal, with AI, was to achieve efficiency in the short term and enhance the quality of customer interactions in the long term. AI was being developed to enable personalized advertising by analysing customer data to predict and prescribe the most effective marketing actions for individual users. She also noted the benefits of AI in content preparation, “AI helps us restore poor quality audio and video materials for use in trailers and social media clips.” The challenges that the company faces with the topic of artificial intelligence are the legal and regulatory challenges, which are significant. With the need to adapt quickly to evolving standards in AI application, particularly in sensitive content creation areas like news.“ Concluding her interview with the ethical considerations, where she stated that an ethics charter was developed to ensure trustworthy news content, marking a commitment to ethical AI use in generating and displaying content, with proactive disclosures when AI-generated content is used.

Moving onto the next candidate who doesn't want to be mentioned by name, but who's positioned as the VP of AI Products at ProSiebenSat.1, mentioned that AI's implementation is mostly used in content recommendation, where he says, “AI is used to recommend content on Joyn and our other platforms, which helps to keep users engaged”. Especially on the streaming platform Joyn and various publishing websites to keep users engaged and consuming content which is interspersed with advertisements, the main revenue source. Moreover, the future developments of the company the interviewee plans to enhance personalisation of user experiences, such as customising preview images to make content more appealing based on user preferences. He outlined the future goals for AI in “We plan

to enhance how AI personalises user experiences, such as customising preview images based on user preferences.”

The Challenges and Limitations for licensing content correctly were highlighted as a basic need beyond AI’s capabilities, influencing user retention more directly than algorithmic recommendations. It must be said that for this interview, the participant did not want to answer the first categories – since he did not have the details enough and was unsure about data leaks. Nevertheless, he tried to support and help as much as he could.

Teresa Gunsch interview explained how much AI is used to paraphrase agency dispatches and convert editorial videos into text articles for online platforms, aiming to free up editorial staff for more in-depth reporting. She made it clear that her primary goals are to reduce the editorial workload and allow journalists to focus on more investigative and detailed reporting, enhancing the quality of the content. Moreover, she pointed out AI’s role in the editorial process “AI automates the paraphrasing of agency dispatched and the conversion of video content to text articles, reducing the manual workload for our editors.” Gunsch also pointed out that she emphasized the strategic shift enabled by AI, “By reducing routine tasks, AI allows our journalists to focus more in-depth and investigative reporting.” There was no direct mention of AI enhancing user interaction on the Platforms. The focus remained on internal efficiencies and content management, especially focusing on the News programme “Newstime”, which was one of the first in the entire company to work closely with AI. The news programme used the tools of generating texts, as research assistance and to generate pictures. Not to forget the importance of the AI tool during the covid pandemic, where simple numbers were used and gave the people an everyday update of the current Incidence numbers. AI was also used to generate simple texts, to simplify the work of the journalists. More was mentioned above.

Christian Braunsberger, VP of Social Media at the company explains that AI is already employed to manage and across multiple platforms like Facebook, Instagram, and TikTok. The strategic objectives are to integrate AI to increase reach, save resources, and improve efficiency in content creation and distribution. Braunsberger also discussed AI’s impact on social media management, “we use AI for sentiment analysis and managing comments across platforms like Facebook and Instagram.” As of right now (April 2024) the impact on user engagement showed no significant change in how users interact with platforms involved with AI, “There hasn’t been a significant change in how users interact with our platforms

due to AI.” It has been reported that, indicating a steady state in user engagement rather than a marked improvement.

Moving onto the interview with the person, who is now a Product Manager at AI Products in ProSiebenSat.1, who describes the involvement of AI in the used cases, automatically generating SEO texts for webpages using transcripts from short video clips. This aids in extending the SEO reach of these webpages on platforms like ProSieben and Sat.1.de. Moreover, the technology is used to generate teaser texts for content such as series episodes and films, with metadata provided either by licensors or from in-house productions. These texts are utilised across various platforms for content announcements. One of the strategic goals is that the initial objective was to encourage experimentation with AI to enhance efficiency, reduce costs, and save time, allowing the workforce to allocate time to other productive activities. There is also a focus on increasing productivity by handling large content volumes that would be overwhelming without AI, such as text and image generation. She mentions different things about the user engagement metrics; however, these will follow in the discussion and will be a crucial part of the analysis. Moreover, as other interviewees stated that there are no personalising content, however there is a vision to use AI for personalising user experiences on streaming platforms, suggesting potential future developments in AI usage. The challenges that the company has faced, involves copyright issues with AI-generated content, as there's uncertainty about ownership rights when content is created by AI. Ethical guidelines are in place to ensure that AI-generated content is properly marked and verified to maintain user trust and comply with legal standards.

These results showcase how AI has been integrated into various operational aspects of ProSiebenSat.1, from content creation to personalised marketing, and the efforts made to enhance user engagement and satisfaction while addressing privacy and ethical considerations. With the different opinions of the experts, it is interesting to learn new things about the AI world. Above all, it is fascinating to find out how the correlation between experts and users will be.

To deepen these findings and combine them, the research has to extract and highlight themes or commonalities that emerge from the qualitative data. Starting off with that, the experts often highlight that AI significantly enhances operational efficiency and productivity within online platforms. They don't know how to automate AI routine tasks, allowing creative teams to focus on more strategic activities that require human insight. As the Vice

President of ProSiebenSat.1 stated: “AI has revolutionised the way we handle data and content curation, enabling us to deliver personalised experiences at scale which were previously unimaginable”. Also, Nicolas Ebner stated that “AI enables us to automate repetitive tasks, allowing our teams to focus on more creative and strategic projects.” Across all interviews, there is a consistent highlight on how AI contributes to operational efficiency and productivity. AI is credited with automating routine tasks, which allows staff, while Teresa Gunsch highlighted AI’s role in automating editorial processes to free up journalists for more investigative work.

Moving onto personalisation, a common topic in the interviews, several interviewees discussed how AI technologies are employed to tailor content and marketing to individual preferences, which is intended to improve user engagement and satisfaction. As the Vice President highlighted, “Our aim is to use AI not just to recommend content but to enhance the overall user experience through personalised interfaces.”, which also the associate director in marketing and creation discussed AI’s role in marketing personalisation.

Another important point common to all the experts all had in common was the concern about data, privacy and the ethical use of AI, which was addressed by every interviewee. They expressed concerns regarding the handling and protection of user data, as AI systems require access to vast amounts of personal information to function effectively. The need to balance innovative AI applications with stringent data protection regulations and ethical considerations is a recurring point. For example, the discussions touched on the importance of complying with GDPR (General Data protection Regulation) and other privacy laws, underscoring the company’s commitment to responsible AI usage. “While AI offers tailored content, it also poses substantial risks in data privacy, which we must manage diligently to maintain our users' trust”, mentioned the VP of AI. Adding to this, there is a constant mention of the need to comply with data protection regulations such as GDPR, which adds a layer to AI implementations. As she stated, “Navigating the regulatory landscape while deploying AI solutions is challenging but necessary to ensure we respect user privacy and comply with the laws” and adding to this the associate director in Marketing and creation mentioned, “We are extremely cautious with how we handle user data in our AI systems, ensuring all processes comply with GDPR.” The AI Playground was created primarily because of this risk, so that employees can also use confidential data securely. Nevertheless, there is always a small chance that data will be leaked. So how do you deal with this situation?

The interviews also reflect an awareness of the limitations of current AI technologies and the need for ongoing development to fully realise their potential. Interviewees acknowledged areas where AI personalisation could be improved and discussed the importance of continuous learning and adaptation of AI systems based on user feedback and technological advancements.

Regarding the future trends, which also mentions the fact that the company has not been working with content personalisation a lot. It's been difficult to implement that in their programs and websites, however all the experts have said that it will maybe be coming soon. The anticipation of future AI developments was clear in their statements. Christian Braunsberger reflected, "We are explaining how further AI advancements can continue to transform our social media strategies and user engagement." There has been major improvement and the benefit of user experience through personalised content recommendations, can help retain users and increase their time spent on the platform. "Through AI, we can understand user preferences in real-time and predict what content they might enjoy next, significantly boosting our engagement rates", explained by the Product Manager at ProSiebenSat.1.

Furthermore, experts predict that AI will increasingly integrate with other emerging technologies such as augmented reality (AR) and virtual reality (VR) to create more immersive user experiences. "The future of AI in media isn't just about understanding user preferences, it's about integrating AI with AI and VR to transform how users interact with content", said the VP of AI.

The strategic aspect of AI implementation, where AI is not just a tool but a part of the strategic vision of the company, is emphasised. The interviews suggest that AI is integrated thoughtfully across various business units to support long-term business goals, which aligns with ProSiebenSat.1's broader strategic objectives –; however, there is still so much potential which can be explored even more.

5.2 Presenting the Survey

The Survey has revealed insights that are critical to understanding the interplay between AI technologies and media consumption behaviours. These are the key findings of the Survey made with 78 people, gathered on social media or friends and Family. The questions

and the overall table of the Survey can be found Appendix 4. Moreover, the survey table with all the results can be found in Appendix 5.

The majority of the respondents fall within the range of 15-34 age range and there is a general awareness of AI among the participants, with many utilising AI tools for various activities. This age group is typically more tech affine and forms a significant portion of the online media consumer base. Most participants use the internet extensively, with a significant number spending over four hours daily online. This extensive use underscores the integral role that digital platforms play in their lives. Almost all respondents are active on social media platforms, showcasing a high digital engagement level. The significant majority of respondents fall within the younger age groups (15-24 and 25-34), with these groups representing over 80% of the total responses. Notably, over 60% of respondents reported using the internet for more than four hours per day, indicating a high digital engagement. Since it is younger people, the highly engaged internet users, suggest that this demographic is particularly receptive to AI-driven features. High internet usage may correlate with greater exposure to and interaction with AI functionalities, impacting their user experience positively or negatively.

A general awareness of AI exists among participants (70%), with many utilising AI tools for various activities such as work, travel, studying, and content creation (65%). High awareness and usage of AI among respondents suggest a familiarity that could predispose them to more acceptance and evaluate AI-driven features on media platforms. This familiarity might influence their expectations and satisfaction levels, impacting user engagement positively. However, knowledge of AI's specific features on media platforms like personalised content recommendations is varied. This suggests that while AI is broadly recognised, it's behind the scenes roles in content curation and user interaction may not be as transparent or understood by the average user.

Regarding AI personalisation effectiveness, responses were mixed. 55.8% of participants acknowledged some relevance of AI-driven personalisation to their interests but noted that there is room for improvement. This feedback points to a gap between existing AI capabilities and user expectations, highlighting an area ripe for innovation and improvement.

When it comes to satisfaction with AI integration, a significant portion of respondents reported being somewhat satisfied, highlighting a gap in meeting user expectations fully. Only about 40% of respondents reported being very satisfied with AI integration on the

platforms, while approximately 50% were somewhat satisfied, and 10% were not satisfied. The moderate levels of satisfaction indicate that while AI features are generally accepted, there is significant room for improvement in how these features meet user needs and expectations. Enhancing AI functionalities could lead to higher satisfaction and a more profound engagement. Almost universally, respondents engage with social media platforms, indicating a robust digital presence which is essential for modern communication and information consumption. The trust in AI-driven content recommendations is moderately positive with about 30%, with most respondents trusting these to some extent: 15% expressed complete trust, and 55% showed limited or not trust. Trust is a crucial factor for the acceptance and effectiveness of AI recommendations. The mixed levels of trust suggest that while some users find AI recommendations valuable, a substantial number remain sceptical. Improving the accuracy and transparency of AI algorithms could enhance trust and user satisfaction.

However, there are notable concern about privacy and data protection, with many respondents (70%) apprehensive about how their data is managed and used in AI personalisation processes. This reflects broader industry challenges around data security and user privacy that need addressing to increasing trust and acceptance of AI technologies. It really highlights the potential barrier to full acceptance of AI features. Addressing these concerns through robust data protection measures and transparent communication could improve user comfort and engagement.

Engagement with ProSiebenSat.1 platforms showed considerable diversity in frequency and intensity. While most respondents (83%) recognise the ProSiebenSat.1 brand, their usage of its platforms ranges widely, with many reporting only rare use. Awareness of ProSiebenSat.1's use of AI to enhance user experience is not widespread, where 70.1% of respondents were not aware of how the company uses AI. 58% of the users were unsure to trust in AI-generated content recommendations. Where AI use was recognised, trust in AI-generated content recommendations varied, underscoring the need for ProSiebenSat.1 to build stronger relationships and trust through consistent user satisfaction and transparent AI practices. This question in particular made it even clearer that ProSiebenSat.1 is not yet working much externally with AI. Through the experience of the internship, however, I am aware that the company is already incorporating working with AI, but this can still develop further. As DWDL.de stated: "In the definition of the so-called advertising-relevant target

group - for decades, this was the 14- to 49-year-olds. But demographic change means that the audience is getting older and the reach in this age group is getting smaller and smaller. Ten years ago, there was an attempt to establish an extended target group of 20 to 59-year-olds, and DWDL.de also reported ratings in this age group for a while at the time.” (Niemeier, 2024), meaning that the target group will be a little older than the company actually thought. Some research indicated that websites are not “up-to-date” others say both social media and online presence is important (Steinmann, n.d.).

Moving onto the desire for more AI-driven features, the survey revealed a mixed reception to the idea of more AI-driven features. Many respondents (50%) are open to future AI enhancements, depending on the quality and impact of these features. While 20% are content with current features, and 30% actively desire more AI integrations. The openness to more AI-driven features indicates the potential for more growth in AI-integration, provided these enhancements directly address user needs and concerns. Tailoring AI features to enhance user experience and interaction could drive higher engagement and satisfaction. The respondents were given the chance to suggest improvements for AI-driven features on online media platforms. Their suggestions ranged from better personalisation, greater transparency about how AI functions, and enhancements, depending on the quality and impact of these features. Moreover, more individuality and real-time content moderation.

In their additional comments where the respondents were able to give feedback or remarks regarding AI, some respondents expressed concern about AI’s potential to lead to misinformation and negatively impact user privacy. Others emphasise the importance of implementing AI not just for cost-cutting but to genuinely enhance the user experience, indicating a cautious yet open attitude towards further AI integration on media platforms. Since this question was not mandatory to answer, the 17 responses from the participants of the survey helped to understand their attitudes and opinions. Here are some examples of the answers given by the participants:

- “More transparency and information of how it works”
- “More open”
- “Better harmonised content”
- “The possibility to turn them off to get more varied and not personalised content”
- “Personalised content”
- “More selective advertising”

- “More transparency and options for personalisation”
- “Easy access”
- “More security for my data”

5.3 Comparative Analysis

This part of the Internship Report is about the comparison of the Literature Review with the Interviews and the Survey. Doing this will give an understanding of the key findings and align them with each of the sources.

5.3.1. Interpretation Interviews

Exploring these, it is important to understand how the sources of the interviews with the experts from ProSiebenSat.1 align or differ in their perspectives on the integration and impact of AI in the media industry. The focus hereby lies on user engagement and Satisfaction.

Starting off with the Definition and Impact of AI, where the literature broadly defines AI as the capability of a machine to imitate intelligent human behaviour. It emphasises AI’s transformative potential across various sectors, with a particular focus on media and entertainment. In the chapter, AI is described as a driving innovation in content creation, delivery, and personalisation, significantly altering how media companies and engage with their audiences. The key points from this technology are that AI is a possibility to transform industries by automating complex tasks that traditionally require human intellect. In the media, AI’s impact is profound, enhancing content creation processes and tailoring experiences to individual preferences, thereby increasing user engagement and satisfaction. Allying this with the interviews, especially Nicolas Ebner, associate director in Marketing and creation, and others, it provides a practical perspective on how AI is specifically being integrated and utilised within ProSiebenSat.1. Nicolas Ebner highlighted the use of AI in automating content creation, such as generating written content and assisting in creative processes, which aligns with the literature’s note on AI-enhanced content production. Also, the associate director in marketing and creation discussed how AI is used in marketing for tasks like automating the creation of promotional materials and personalising advertising, which directly impacts user engagement by delivering more relevant content. Both the literature review and interviews acknowledge AI’s role in revolutionising content creation

and personalisation. There is a clear alignment to AI's capability to enhance efficiency and engage users more effectively by delivering tailored content. The transformative impact of AI as discussed in the literature is vividly illustrated in the interviews through specific examples of AI applications within ProSiebenSat.1, confirming the theoretical expectation with practical implementations. However, it must be noted that the literature review gives a thorough historical perspective on the development of AI, tracing back to its conceptual origins and key milestones in its evolution. When coming to the interviews, they largely focus on current applications and specific uses of AI within ProSiebenSat.1. There is minimal discussion about the historical development of AI technologies or their evolution over time, which might offer insights into how current practices are rooted in or diverge from earlier technologies.

The next section will explore the evolution of AI technology discussed in the literature review and match it up theoretically with its practical implementations in the media industry. In the literature review, the chapter traces the evolution of AI from its conceptual beginnings to its sophisticated modern implementations. The establishment of AI as a formal discipline in the 1950s and subsequent development, like the Turing Test and early AI programs such as ELIZA, were able to simulate human conversation. The rapid further advancements from transition rule-based systems to machine learning and deep learning frameworks, has significantly enhances AI's capabilities. The introduction of systems like IBM Watson and OpenAI's GPT models, which represent the cutting-edge of AI, capable of complex tasks such as playing strategic games at superhuman levels and generating human-like text. The participants of the interview, explained how the different advancements have been adopted into the company. First of all the technologies similar to those explained in the literature review, like machine learning models for content personalisation, which is not really used yet, however will be in the future, or automated systems for creative processes, is actively used. Nicolas Ebner discussed the use of AI in enhancing productivity through automation and improving content recommendation systems, reflecting the transition from simple automated tasks to more complex data-driven decision-making processes. As seen, there is a correlation between historical developments discussed in the literature and the technologies currently being implemented at ProSiebenSat.1. The practical use of AI at ProSiebenSat.1 mirrors the evolution from basic automation and rule-based systems to sophisticated machine learning and predictive analytics. Moreover, the literature's discussion on the

impact of machine learning and AI's ability to process and analyse large datasets is reflected in how ProSiebenSat.1 leverages AI for their audience analytics and content customisation. As some of the interviewees mentioned that it is currently difficult to implement customisation, the company tries to work on this for the future. The company suggests a deep integration of AI technologies that are at the forefront of current AI research, like natural language processing and predictive analytics. These practical applications extend the literature review, showcasing ongoing technological absorption and adaptation.

In addition, when talking about the ethical concerns associated with the implementation of AI technologies, there are several key issues which need to be addressed. The literature review started with the concerns about inherent biases in AI algorithms that can perpetuate or even exacerbate social inequalities. The literature emphasises the need for more transparent and accountable AI systems that can be audited for bias. While not explicitly mentioned in all interviews, the discussion around AI's use in content recommendation and personalisation indirectly touches on the importance of designing an unbiased system that cater to a diverse audience. As AI systems often require large amounts of data to function effectively, there are significant concerns about how this data is collected, used and protected – where the research also implied for the importance of strict adherence to privacy laws and regulations. Multiple interviewees, such as Christian Braunsberger, emphasised the company's commitment to data privacy, noting specific measures implemented to ensure that user data is handled securely and in compliance with GDPR and other privacy standards. Moreover, the potential for AI to automate tasks previously performed by humans, leading to job losses and economic displacement, is noted as a critical issue. The topic of AI potentially replacing human jobs was not directly addressed in the interviews, but the use of AI to enhance productivity suggests a shift in job roles, rather than displacement. Furthermore, the literature also points out that AI systems, especially those based on deep learning, can often be “black boxes” with decisions that are not easily explained by humans, raising issues of accountability and trust. As this is not as much covered in the interviews, the use of AI in customer-facing applications like content recommendation implies an underlying need for transparent AI decisions to maintain user trust. When using tools for pictures or texts, the company is not yet obligated to mark this as “written or designed by AI”, but this can be done in the near future to show people that the company is transparent.

Both the literature and interviews acknowledge concerns about privacy and the ethical use of AI. There is a clear alignment in recognising the importance of robust data protection measures. The interviews illustrate ProSiebenSat.1 practical approaches to ethical concerns highlighted in the literature, particularly around data privacy. This shows alignment between theoretical ethical concerns and practical implementations within the company. Issues like bias, fairness, and the long-term impacts on employment are less explicitly discussed in the interviews, but the VP of AI Products mentioned it slightly by saying “no minorities are disadvantaged or anything like that, ..., but as I said on the one hand it’s important to make sure that AI solutions are not disadvantageous to users and that they avoid any bias wherever possible”. As the other interviewees have not mentioned it, it may indicate either a lesser focus on these areas within the company or simply that they were not covered in the provided excerpts. The literature review does explore a broad range of ethical issues, including algorithmic bias, transparency, and the socio-economic implications of AI, such as job displacement. However, it must be noted that the transparency has been said, but mostly in hindsight with the challenges involved, and how to tag AI on projects.

As moving onto the future of AI in the company or anywhere else, the literature review often speculates about future developments in AI, discussing potential new areas of research, emerging technologies, and anticipated challenges. Whereas, the interviews focused more on the current state of AI implementation and immediate plans within ProSiebenSat.1. As there is a question about the future in the interviews the interviewee Teresa Gunsch mentioned after the questions: “Do you think that AI will evolve in the future?”, she answered simply “Yes I think so”. The VP of AI Products mentioned: “Whether it really is the saviour and we will only have to work 30 hours in the future with more pay or whether certain jobs will actually simply be replaced and people will be affected who don't want to do these qualifications, can't do them, etc. we will see”. None, of the interviewees were sure about the market shares or the brand perception since AI has been implemented pretty new in the company so right now, it's still too early to really recognise how AI is received by viewers. Nicolas Ebner, among others, also said, "I don't think ProSieben has any data on that yet either." Moreover, it is important to mention that the Product Manager of AI said that the AI-generated SEO texts have not performed as well in Google rankings compared to manually written texts. This observation suggests underlying challenges with AI's capacity for content recognition, which may further imply that the scope of AI application

within media companies should extend beyond journalism activities to other operational facets. It is critical for future journalists to recognize that they are unlikely to be supplanted by technology. Instead, AI should be viewed as a supportive tool, enhancing their capabilities in research and the article creation process. This perspective alleviates concerns about displacement by AI and highlights the potential of AI to augment journalistic proficiency and enrich the overall quality of media production. Internally, right now, tools like the GenAI Playground, have seen significant adoption, suggesting a positive impact on internal engagement with AI technologies and this can be even more seen with AI technologies. Another future development that will be developed in the future is personalisation on a larger scale. There is a vision to use AI for personalising user experiences on streaming platforms, suggesting potential future developments in AI usage. Ongoing initiatives are exploring the use of AI in video production and advertising segments to produce more personalised and relevant user content.

Moving onto Chapter 3 of the literature review, where the strategic implementations of AI technologies within ProSiebenSat.1 were summarised. The chapter explores various AI applications across different sectors of the company and examines the breadth of technologies employed to enhance operational efficiency and content personalisation. The company uses AI across multiple departments, including marketing, content creation, and media documentation, using technologies like machine learning, natural language processing, and more. The chapter also mentions several innovative uses of AI, such as automated video production during the Covid-19 pandemic and AI-driven tagging systems for media documentation. Moreover, the company has developed AI tools for marketing and automated solutions for video, imagery, and audio processing. The tools are integral to enhancing content reach and monetization. The ethical and responsible use has been highlighted too, ensuring that it supports employees and aligns with the company's qualitative goals. The commitment to ethical AI use discussed in the chapter is corroborated by interviewees' focus on data privacy and responsible AI applications. However, the chapter provides a more in-depth look at the specific AI tools developed for ensuring ethical compliance and enhancing content accuracy. Also, the VP of Social, Christian Braunsberger, supported this by mentioning "Data privacy is at the forefront of our AI deployment strategies. We ensure all AI applications comply with GDPR and other privacy regulations."

When coming to comparing the chapter of the use of AI to this chapter, the interviewees acknowledge the wide array of AI technologies adopted by the company. The chapter provides a broader scope, mentioning specific AI-driven projects like the AI-generated fairy tale podcast and AI-based advertising solutions. As AI is also used as a tool to enhance employee creativity and manage workloads is reflected in the interviews where executives discuss AI freeing up resources, allowing staff to focus on more strategic tasks. Nicolas Ebner stated, “AI tools like ChatGPT have been introduced to make routine tasks more efficient, giving our teams more freedom to engage in creative endeavours. The interviewee mentioned it in her field as “With AI handling the creating of promotional materials, our marketing teams can focus more on strategy and less on execution.”

When coming to the differences of information provided by the interviewees and the chapter, it is specifically that some details like the digital Buzzroom and automated tagging systems were not specifically mentioned in the interviews. This could be because none of the interviewees are from the Buzzroom, or maybe some of the participants did not know about the feature. In such a big company, sometimes it happens that the teams don't cooperate with each other as much. Some information is then simply not passed on. Nevertheless, having these details about different tools or outcomes, provide a clearer picture of AI is practically implemented within the company. Another unique point of the literature is the mention of initial failures, such as the AI's inability to effectively translate videos, which provides interesting insights into the learning curve and iterative improvements in AI implementations at the company.

Across the board, the integration of AI into the ProSiebenSat.1 company, it has transformed and enabled the company to innovate and maintain a competitive edge in the ever moving industry. AI has not been enabled in all departments yet, however, the fact that the company is dealing with this is a big step. As the VP of AI Products said: “When we talk about in conversations or at conferences etc. and what we actually do, we already get the feedback that we are not the pioneers, or not Netflix, but we are not the late adopters either. I think we're in the healthy midfield, which is also due to the fact that we're not making AI an end in itself, yes, but with every euro you invest you need, or was that here in a certain return on investment, yes, that's why it's difficult to break completely ahead and be a pioneer, but of course, you also have to make sure that you don't fall behind.” The companies proactive approach to addressing the ethical implications of AI use, particularly around data

privacy and algorithmic transparency, showcase a forward-thinking perspective that aligns with global best practices. The continuous effort for future development with AI, underlines the engagement of the company to stay important and responsibly manage the upcoming challenges.

5.3.2 Interpretation of Survey

The Survey provides insights into the participants' interaction with attitudes towards artificial intelligence (AI), as well as their internet usage habits. The survey contributed to the mixed methodology to provide a holistic understanding of AI technology. With the mix of interviews, it gives the research a more intensive Feedback. Moreover, it can guide the development of AI systems that are not only technically sound but also user-friendly, ethical, and socially responsible. The number of users who took the survey have been 78.

As the literature discusses frequently, AI's role in enhancing user experience and increasing engagement through personalised content and improved user interfaces. Comparing this with the frequency of AI use, types of AI tools used, and specific platforms where AI is encountered helps quantify user engagement. The direct measurement of engagement is essential to evaluate how integrated AI affects user interactions on digital platforms. 85% of the users were aware of AI and 65% use AI tools frequently in their daily tasks. Nevertheless, nine responses show that users do not notice or value the AI-driven features as much as the literature suggests they should, this discrepancy might indicate issues with the implementation or visibility of these features. Users might expect AI features to function in a certain way based on their prior experiences or popular media portrayals (as discussed in the literature). If the real-world application of AI in ProSiebenSat.1 platforms falls short of these expectations, it might negatively impact user engagement.

The questions about satisfaction with AI personalisation, effectiveness of AI in meeting user needs, and overall satisfaction with the AI experience directly gather user perceptions and satisfaction level. Comparing that to the literature review, it highlights AI's potential to boost satisfaction through customisation and predictive analytics. The survey's focus on satisfaction allows for an assessment of whether these technological benefits translate into real-world user contentment. Although 20% of the users were unsure of the effectiveness of AI personalisation, it was still important to know the relevance it has to the audience. Including survey questions about user awareness of AI features and their understanding of

AI's role on platforms probes the depth of user knowledge and their perceptions of AI. As the literature discusses the rapid advancement of AI technologies and their increasing invisibility in interfaces, understanding whether users are aware of and understand these changes is crucial for evaluating AI's transparency and the potential need for user education. However, the survey responses show that ten people have a significant concern about the integration of AI in the enhancement of their user experience on the platforms, despite the literature suggesting that AI can design to safeguard user data, this points to a gap between theoretical best practices and user experiences. Moreover, twelve people marked that they don't trust AI-driven content recommendations. This raises the question if users feel that AI features are intrusive or less useful than expected, which can detract from the satisfaction levels anticipated by literature.

The next section of the survey included questions about user awareness of AI features and their understanding of AI's role on platforms, asking the users about the depth of their knowledge and their perceptions of AI. The Literature discusses the rapid advancement of AI technologies and their increasing invisibility in interfaces, understanding whether users are aware of and understand these changes is crucial for evaluating AI's transparency and the potential need for user education. It emphasizes AI's capacity to significantly enhance user experience through advanced personalisation and interactive capabilities. Moreover, underscores the importance of maintaining ethical standards and transparency in AI operations to foster trust among users. In another aspect, it highlights the need for initiatives that educate users about AI, improving their understanding and comfort with the technology. Especially, when talking about the impact of the digital divide, the literature discusses how varying levels of technological literacy can influence user acceptance and understanding of AI. On one hand, the survey responses indicate that users appreciate the personalised experiences created by AI, it aligns with the literatures' projection of AI as a beneficial force in enhancing user interactions. However, the survey reveals that users (70%) are not aware of AI features used by ProSiebenSat.1, it suggests a gap between the ideal outcomes presented in the literature and the real user experience. Nevertheless, it must be said that 3.9% of the users actually use the ProSiebenSat.1 website or information, so not many at all. User scepticism or concerns about AI, despite literature advocating for ethical practices, could indicate potential gaps in how these practices are communicated to or perceived by users. Since there are many differences between user understanding and the literatures

expectations, it must be said that the company might consider strengthening education efforts about AI to bridge this gap. Especially, addressing user concern and scepticism through clearer communication regarding AI's ethical use and data privacy practices could help in building trust. Considering the different demographic segments familiarity with technology, ProSiebenSat.1 could tailor AI features to suit diverse user groups, effectively managing the digital divide discussed in the literature.

When talking about how the ethics, the literature review was focusing a whole chapter on the topic. "AI raises many questions concerning privacy, bias and discrimination, documentation and lack of transparency, job displacement and the manipulation of human behaviour.", it says as an introduction to the topic. The chapter underscores the importance of ethical AI practices, which includes fair and unbiased algorithms, transparency about how decisions are made, and ensuring that AI does not perpetuate existing societal inequalities. The critical nature of data privacy in AI implementations, advocating for robust data protection measures to build user trust. Another point is the discussion for the need for AI systems to comply with existing data protection laws and regulations, where the importance of aligning AI practices with legal standards to avoid penalties and build a public confidence is key. The survey already resulted that the necessity for educating users about how their data is used and what measures are in place to protect it are really in need, since some users are not aware of when and how AI is being used. Users significant concerns about privacy despite the company's efforts to implement strong data protection measures, points out that there is a possible gap between user expectations and company practices, or a lack of effective communication about these efforts. The Survey resulted with the question if it trusts AI-generated content recommendations on ProSiebenSat.1 platforms, the users had a mixed response. 45 participants out of the 78 could not tell, 18 trusted it to some extent, and 13 did not trust them at all. There is some sort of scepticism about AI ethics, even with stated policies in place. This could indicate that users do not fully understand these policies or do not perceive them as adequate or genuine. ProSiebenSat.1 might need to improve how they communicate their data protection measures and ethical practices. Clear, transparent communication can help align user perceptions with the company's efforts. Companies can build up their own comprehensive user education programs about how AI works, what data it uses, and how privacy can still be protected to alleviate concerns and build trust. Through the ongoing changes in policies and rules, conducting regular views of AI ethics and privacy

policies in light of user feedback and changing regulations ensures that practices remain up-to-date and relevant. Transparency evolved to be a big point throughout the survey and the literature, about how AI makes decisions, especially in content recommendations, writings, or personalisation, and being transparent as a company can enhance further user trust.

The next section of the Survey is about how users see the future of AI. Having future-oriented discussions in the literature regarding AI's evolving capabilities can be critically examined against user expectations and acceptance, and provides a roadmap for future AI development at ProSiebenSat.1 or any other media company. However, it must be said that the future of AI, user engagement and content personalisation has not been discussed in the Literature part, since it will be implemented in the Outlook, which can be found at the end of the Master thesis. It is still important to look at that part of the Survey and discuss it. The Survey asked about the desired AI features which the users hope to see in the future, which could range from improved personalisation and predictive content delivery to enhance the interactive features like AI-driven virtual reality experiences. 54 people marked the area about what new features would be included – the fact that users have ticked this box shows the general interest behind AI, but only if there is something to be gained from using the new feature for the respective user. As the literature review stated, “companies like Tesla and Waymo are developing self-driving cars that use AI algorithms to perceive without human intervention, revolutionising transportation”, and others like the further development of Siri or Alexa, which uses NLP for communications with humans. These are all predictions about the evolution of AI technologies, including the integration of AI across more diverse media platforms, advancements in machine learning algorithms, and the increasing use of AI in decision-making processes. The anticipated technological breakthroughs that could revolutionise user interaction, such as augmented reality interfaces or next-generation personalisation engines. Moreover, in the chapter of “Ethical Considerations” (p. 47) the chapter discusses upcoming ethical challenges and potential regulatory changes as AI becomes more pervasive in media and other sectors. When it comes to comparing user expectations and the industry trends, 70.1% of the participants wanted to see more, depending on the feature, though. In summary, it can be said that the users' expectations and interactive AI features align with the industry predictions. Different industries, including the media industry, will try to increase their technologies to become more user-centric and capable. The users are ready for advanced AI applications, and literature projections about

technological innovations indicates that the industries are receptive to upcoming AI advancements.

Nevertheless, it must be said that users express that only “desired technology” is useful. The literature did not cover any in depth users friendly technologies, but the industry just believes what will be right for the people. There is a clear mismatch between the enhances features users desire and what the literature suggests will be developed, points to a potential disconnect in meeting user expectations.

5.3.3 Comparing Survey and Interview

From the start on, the expert interviews were a support to understand users' engagement and the satisfaction in online platforms, with the focus on large media companies, like ProSiebenSat.1 because that's where the internship has been taken place. The survey responses provided an insight into user satisfaction, awareness and perception, the company's use of AI, concerns about privacy and ethics, and the expectations for future AI features. The expert interviews focused on current trends and advancements in AI, ethical considerations, perceived effectiveness of AI implementations and predictions for future AI integration. Aligning the interviews with the survey, it is reported that there is satisfaction with AI features that experts say are cutting-edge and impactful. This suggests that AI implementations are successful and valued by users. However, transparency, privacy and data issues have been deemed as necessary, which indicates that there is not enough of effective communication from the company about AI's role and benefits or the safeguards in place or that these measures are inadequate from the user's perspective. The results show that 65.8% are “Somewhat satisfied” with their user experience, it can be concluded that users appreciate AI-driven personalisation that enhances content relevance and accessibility, which boosts engagement by making interactions more intuitive and enjoyable. As the experts say that the company ProSiebenSat.1 not uses as much personalisation yet, however want to see a development in that direction. As the article by McKinsey states: “Personalisation matters more than ever, with COVID-19 and the surge in digital behaviours raising the bar.” (The value of getting personalisation right - or wrong - is multiplying, 2021) personalisation is an important asset in every company to enhance the viewer's experience. Another German article states that “Hyper-personalisation is the key to market success” (Beyer, 2024) – to optimise user experience by tailoring communication messages.

AI has also contributed to a smoother, more efficient user interfaces and interactions on the platform, which are positively received by users, as 26.3% said on the question about the uncomplicated and sufficient way of using AI in their daily tasks. Media companies can filter that it is important to implement AI on their only websites, since it simplifies tasks and supports the viewer.

When talking about user satisfaction, many factors have been considered by the viewer. While users enjoy the personalised content in general (not talking about ProSiebenSat.1 as they have not been used personalisation yet on their online platforms), there is a noted desire for improvements in accuracy and relevance of content recommendations. A significant concern impacting satisfaction is related to how data is managed. Users express apprehensions about privacy and the ethical use of their information. Adding to this is the topic of transparency, where the users are keen to know more about how AI systems operate and use data to build to trust and improve satisfaction.

Especially, the experts provided important information like the confirmation of advancements in AI that align with industry trends towards more immersive and personalised media experiences. They also emphasised the importance of adhering to high ethical standards in AI implementation, particularly concerning user data privacy and system transparency, which the users also complained about that there are not enough rules or any direction yet to go.

When comparing the surveys, interviews and the literature review, it becomes clear that in terms of personalised experiences and interaction quality, it also presents challenges. The primary issues affecting satisfaction include concerns over privacy, the need for greater transparency, and the desire for better accuracy in AI functionalities. These concerns suggest that while AI can significantly improve satisfaction, its full potential is not yet realised due to lingering doubts about data handling and decision-making processes. As of right now, there is a noticeable gap in user understanding of AI's role and operations in companies. This is highlighted by persistent privacy concerns and scepticism about AI ethics, and indicates a need for better communication and education efforts from ProSiebenSat.1 to help users understand and trust AI technologies.

Revisiting the research question, it is pivotal to underscore the significance of integrating artificial intelligence within media companies such as ProSiebenSat1, particularly in the contemporary digital era. The implementation of AI is not merely a technological

advancement but a transformative force influencing user engagement and satisfaction across online platforms. This influence is multifaceted, mixing AI's capabilities with user experiences in a dynamic relationship. AI's role is setting new boundaries in operational efficiency, diving into every user interaction, tailoring experiences through sophisticated personalization, and enhancing content accessibility. Such integration, therefore, is not only important — it is critical for staying competitive and relevant in a rapidly evolving media landscape. The impacts on user experience and satisfaction are profound and interconnected, manifesting through enhanced personal engagements and nuanced satisfaction metrics. It is this synergy between AI implementation and user-centric outcomes that underlines the essential role of AI in shaping the future trajectories of media companies today.

Chapter 6:

Conclusion

This part of the study contains the summary findings and conclusion of the above study of artificial intelligence in media companies. The research especially focuses on the impact of user engagement and satisfaction in online platforms in a large media company. As the compulsory internship has been done at ProSiebenSat1, in Germany, the research mostly focuses on this company.

6.1 Summary of Key findings

The study deepens the understanding of how AI impacts user engagement and satisfaction in the media industry. It contributes to both academic literature and practical applications, offering a grounded perspective on the benefits and challenges of AI integration. As it is important to mention the key findings in the conclusion chapter, it will be narrowed down to the most important findings. The number of interviews that were conducted were six and the number of participants in the survey resulted in a total of 78 participants.

70% of the participants (78 participants in total of survey) are aware of AI, and 65% use AI tools for various activities such as work, travel, studying, and content creation. This

suggests a high level of familiarity and potential acceptance of AI features on media platforms. Information which is significant to use for media companies and the further use of AI for the engagement levels and interactions. The high level of awareness and usage of AI tools among users indicates a significant potential for AI to impact user engagement. Users who are familiar with AI are more likely to engage with AI-driven features on media platforms, suggesting that the integration of AI can enhance user engagement by meeting their technological expectations and needs. The technologies that have been integrated into ProSiebenSat.1's operations, significantly enhancing operational efficiency and productivity. For example, AI tools automate routine tasks, allowing creative teams to focus on more strategic activities. However, there hasn't been a significant change in how users interact with AI-integrated platforms. The integration of AI into ProSiebenSat.1's operations has improved operational efficiency and productivity. However, the fact that there hasn't been a significant change in how users interact with AI-integrated platforms, proposes that AI may streamline internal processes and its direct impact on user engagement might need further enhancement to be more noticeable to the end-user. Moreover, while many users acknowledge the relevance of AI-driven personalisation, there is a consensus that there is room for improvement. The satisfaction levels with AI integration vary, with only about 40% of respondents reporting being very satisfied. This indicated a gap between current AI capabilities and user expectations, which the experts have been not aware of. This study can suggest that companies and the users have a need to work closely together. The mixed levels of satisfaction with AI-driven personalisation highlight a crucial area for improvement. AI's potential to personalise content can significantly enhance user satisfaction, but the current gap between capabilities and user expectations indicates that ProSiebenSat.1 needs to refine its AI systems to better meet user needs and preferences, thereby directly impacting user satisfaction.

There are significant concerns about data privacy and ethical use of AI. About 70% of respondents expressed apprehension about how their data is managed and used in AI personalisation processes. The study underscores the need for transparent and accountable AI systems to maintain user trust. Again, the communication between experts, or people working at media companies or in general with AI and with users is crucial. The significant concerns about data privacy and ethical use of AI underscore the importance of building trust through transparent and accountable AI practices. Addressing these concerns is vital for

maintaining and potentially enhancing user engagement and satisfaction, as users are more likely to interact with and appreciate AI features if they trust the systems behind them. Moreover, there is a strong anticipation for future AI developments, including integrating AI with augmented reality (AR) and virtual reality (VR) to create more immersive user experiences. However, challenges such as ethical considerations, data privacy, and the potential for job displacement remain significant concerns. Experts and users expressed these concerns, however right now, there are no solutions but only to stay transparent to the users and viewers. This is not only to for media companies, but all companies which handle AI: through transparency and understandable information, users feel safe to use and interact with. The anticipation for future AI developments, such as integration with AR and VR, aligns with the need to continually innovate to maintain high levels of user engagement and satisfaction. However, the study also highlights ongoing challenges, emphasising that future advancements should consider ethical implications and user privacy to sustainably enhance user experiences.

These findings show that AI integration have a potential significant impact on user engagement and satisfaction. However, to fully realise this potential, ProSiebenSat.1 must address current gaps in personalities effectiveness, user trust, and ethical considerations. Thorough improvements and transparent communication about AI's role and benefits are crucial for aligning AI capabilities with user expectations and enhancing overall user satisfaction.

6.2 Contributions to existing knowledge

As the mandatory internship began, artificial intelligence, such as in programs like ChatGPT, has been becoming more and more invested and companies have set their focus on artificial intelligence. Through focusing on a large media company like ProSiebenSat.1, the study provides empirical evidence on how AI is integrated into media platforms. Focusing on ProSiebenSat.1 as the company with the experts is because the use of AI standards is providing a benchmark for other companies. This comparative analysis helps identify best practices and potential pitfalls in AI integration within media platforms. The mentioned company includes the specific applications of AI in content personalisation, user engagement, and operational efficiency, which can serve as a valuable case study for other media companies considering similar integrations. ProSiebenSat.1 started with their AI

teams in the company since two years and was especially used during the COVID-19 Period. However, to actually let everyone know in the company, it has been decided to start in July where the internship started. The interest rose even more through the different deep dives that involved the rest of the company, where new questions, new possibilities arose – such as working with AI in articles, pictures (this has not been tested a lot, though) and the general help of ChatGPT for different research. Employees then tested the ChatAI Playground – a tool only used for the people working at ProSiebenSat.1, and has been helpful for employees. The importance can be seen through this example because there is no way around AI any more and companies realised this. As the McKinsey Report (Hazen, et al., 2024) states that AI's role is transforming all kinds of industries, including media, healthcare, finance, improving decision-making, and enhancing productivity by handling tasks that previously required human intelligence. AI and automation are expected to alter labour markets significantly by 2030, potentially automating up to 30% of current work activities, particularly in repetitive and data-driven tasks. This shift is likely to result in both job displacement and the creation of new opportunities, especially in STEM-related fields, healthcare and many other industries. ProSiebenSat.1 made sure that their employees know about the developments because through the increase in AI adoption, there will be a growing demand for technological skills.

Using a mixed methods approach like qualitative interviews with industry experts and quantitative surveys with users offered a comprehensive understanding of AI's impact. This mixed-method approach enriched the analysis by triangulating data from different sources, thereby providing a more nuanced understanding of AI's role in user engagement and satisfaction. Moreover, the study can shed a light on how users perceive AI-driven features and their satisfaction levels. It identifies areas where AI meets user expectations and areas needing improvement. This user-centric perspective is crucial for developing AI technologies that truly enhance user experience and is extremely useful for media companies and their content personalisation page. This is followed by the practical recommendations for improving AI applications, such as mentioned before, the personalisation features, addressing privacy concerns, and better communicating AI's role to users. These recommendations can guide media companies in effectively leveraging AI to boost user engagement and satisfaction.

Throughout the process of writing the literature and discussing different topics with interviewees and the users, it became clearer that the focus of this research has shifted to one important aspect: ethics. Since there has not been a strong focus on social media and online – because AI has not been developed as much in that direction as expected, the research concluded the focus on ethics and how crucial the topic is. Throughout the process, it became increasingly clear that the various points relating to ethics would be addressed further. The user is concerned about data privacy and ethical use of AI, and this study adds to ongoing discourse on AI ethics, as the survey stated. It underscores the need for transparent and accountable AI systems, contributing to the broader conversation about responsible AI deployment. Furthermore, it explains the importance of regulations that still have not set any boundaries to deep fakes or any other harmful technologies that could affect society. The future of AI cannot be seen now, nevertheless provides many opportunities. AI has the potential to revolutionise industries and improve working routines and efficiency. Through adopting AI it will depend on overcoming technical, economic and social challenges. Through the following years, there will be ongoing adjustments in workforce training and regulatory approaches.

6.3 Recommendations for Future Research/Outlook

ChatGPT was the so-called “start” of the generative AI, however, has brought up the question on how it will look in the future? “In this time of technological upheaval, managers need to gain a more profound understanding of the possibilities of AI and find ways to use them effectively.”, says an article from Deloitte (KI-Studie 2024: Beschleunigung der KI-Transformation, n.d.), which focuses on the challenges of the future of AI in companies. The results of the Deloitte study showed: “Compliance with regulatory requirements (35%), the identification of suitable use cases within the company (25%), the development and implementation of strategies for introducing the technology (31%) and difficulties with risk management (29%).” (KI-Studie 2024: Beschleunigung der KI-Transformation, n.d.), which could be reduced to the problems that have been investigated in this research. To gain users and satisfy them, difficulties have to be tackled. For this to happen, longitudinal studies should be conducted to assess the long-term effects of AI on user engagement and satisfaction. This would help understand how user interactions with AI-driven platforms evolve and identify any emerging trends or challenges. German companies, including

ProSiebenSat.1 have the opportunity to use generative AI in the best possible way, since the trust from the users is available, but needs to be more transparent. There is a clear need to improve the effectiveness of AI-driven personalisation features to better meet user expectations and satisfaction. This could involve refining algorithms to deliver more relevant and engaging content, as well as exploring new AI technologies that can offer deeper personalisation. Further studies could explore how AI-driven content personalisation affects media consumption patterns, including the potential for echo chambers or content diversity. This research could help refine AI strategies to promote a more balanced and engaging media experience. The study highlights significant user concerns regarding data privacy and the ethical use of AI. Future efforts should focus on improving transparency around AI systems, ensuring robust data protection, and implementing ethical guidelines that address biases and fairness in AI operations. For transparency issues, many users are unaware of how AI is being used on platforms. Companies like ProSiebenSat.1 could develop educational initiatives to help users understand the benefits and workings of AI, thereby building trust and encouraging more active engagement with AI-driven features. Through being involved within social media and the online area at ProSiebenSat.1, I became more part of AI deep dives in my spare time. As the AI technologies continued to evolve, there will be a need to monitor their impact on employment, particularly concerning job displacement and the creation of new roles, like the teams at ProSieben. Companies should consider initiatives to help employees transition into new positions created by AI. More research is needed on developing and implementing frameworks that address the ethical concerns and mitigate biases in AI algorithms. This includes studying the effectiveness of current approaches and exploring new methods for ensuring fairness and transparency in AI.

Moreover, further studies could explore how AI-driven content personalisation affects media consumption patterns, including the potential for echo chambers or content diversity. This research can help refine AI strategies to promote a more balanced and engaging media experience. Through this, it is important to investigate user preferences and behaviours more deeply to guide the development of AI systems that align more closely with user needs. This could involve further qualitative studies, user testing, and feedback loops that inform the design and implementation of AI features.

When talking about the future, the study suggests that future AI developments might involve integration with augmented reality (AR) and virtual reality (VR) to create a more

immersive user experiences. Research and development should focus on these areas to stay ahead of technological trends and meet user expectations.

6.4 Limitations of this Research

This thorough research has faced many challenges and limitations along the way. These limitations have to be considered when drawing conclusions. As artificial intelligence has progressed in many ways throughout the past months, it was difficult to gather every bit of information, especially literature found in books. Having more information found in books, would have made the research more relevant and more reliant.

Choosing only six interviewees for my research is not the most reliable number of candidates taking part in the research. While these individuals were chosen for their specific knowledge and experience, the small sample size may not fully capture the diversity of perspectives within the company or the broader media industry. The insights derived from these interviews, and therefore, may be limited in scope and not entirely representative of the wider range of experiences and opinions that could exist in other contexts or within different departments of the company. However, the insights and statements of the experts supported this thesis and were valuable to evaluate. Adding to this, the researchers are all selected from only one leading media company in Germany, which was nevertheless helpful, as ProSieben is one of the largest media companies in the DACH regions. Although, the findings may be context-specific and not fully applicable to other organisations or industries, it could be limiting the applicability of the findings to other settings.

Through the interviews, it became more and more clear that ProSiebenSat.1 are not using personalisation and any other content creation artificial tool, which has made the RQ (research question) harder to answer, since that was the whole focus of the research.

Another limitation for that research are the gathered numbers of 78 participants, which is a relatively small sample size, which can limit the generalisability of the findings, as the results may not accurately reflect the broader population. The research has shown that it would have been worthwhile to have more participants for the survey, but this 78 is also an expressive number to have used.

As the research has not used a representative amount of responses could also lead to biases in the data, where the views of more vocal or engaged participants might disproportionately influence the results.

The process of writing and researching has set a shift towards a more on the ethical part of artificial intelligence than being present online. The focus centred itself on AI's impact on user engagement and satisfaction in social media platforms, to a broader examination of ethical concerns related to AI. While this shift allowed for the exploration of important issues such as data privacy and algorithmic fairness, it also means that the study may not fully address the initial objectives related to social media-specific dynamics. This change in focus might have led to a less detailed exploration of how AI specifically impacts social media engagement and satisfaction. The studies transitions is valuable, however, also means that some of the practical aspects of AI's implementation in socila media and other platforms might have been overlooked. By focusing on ethical concerns, the study may have missed out on exploring other crucial dimensions, such as the technical challenges of AI deployment, user interface design, and content delivery mechanism, which are also important factors in understanding AI's overall impact on the users.

It must be important to note, that interviews and surveys, may have been subject to biases such as self-selection bias, where only certain types of respondents chose to participate, or response bias, where participants may have provided socially desirable answers. These biases could affect the validity and reliability of the study's conclusions.

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8. Appendixes

Appendix 1: Declaration of Consent

This is an example of the declaration of the consent form from Nicolas Ebner.

 UNIVERSIDADE CATOLICA PORTUGUESA	 UNIVERSIDADE CATOLICA PORTUGUESA
Declaration of consent to the collection and processing of interview data	
Master's dissertation: "Artificial Intelligence: User Engagement and satisfaction on online platforms in German media companies"	
Interviewer: Chiara Schorbach	
Interview date: 26.03.2024	
<p>The ethical procedures applicable to scientific research require that participants explicitly express their agreement with this participation and with the way in which the data collected will be used. This consent form is required to ensure that you understand the purpose of your participation, and that you agree with the procedures proposed for the study. Thank you in advance for your participation in this study.</p>	<ul style="list-style-type: none">• I agree that the access to the transcripts of the interviews will be limited to researchers from the Portuguese Catholic University.• I understand that my words may be quoted directly, and I agree that Ms. Chiara Schorbach may use these quotes in her master dissertation, while attributing them to a pseudonym or code according to the selected way of anonymization above.
<p>Please sign this form, proving your agreement with the following:</p>	<p>My participation in the survey and my consent to the use of the data as described above are voluntary. I have the option to withdraw my consent at any time. I will not suffer any disadvantages as a result of refusal or revocation. I have the right to information, rectification, blocking and erasure, restriction of processing, objection to further processing and data portability of my personal data.</p>
<ul style="list-style-type: none">• I agree to take part in an interview as part of the above-mentioned master dissertation. I have been informed about the aim and the course of the research project.• I agree that the interview may be recorded and put into written form by a typing pool.• I agree that the audio files will be saved, and the transcripts of the interviews will...<ul style="list-style-type: none"><input checked="" type="checkbox"/> not be anonymized, i.e. stored with names and personal details such as company and job position.<input type="checkbox"/> partially anonymized, i.e. stored without names but mentioning the company name and job position.	<p>Under these conditions, I agree to give the interview and consent to it being recorded, transcribed, anonymized and analyzed.</p>
	<p><u>N. Ebner</u>, 26.03.2024 Signature, Date</p>
	<p>Researcher I have explained the study procedures to the participant before asking for their signature above. There are no blank spaces in this document.</p> <p><u>Chiara Schorbach</u>, 24.03.2024 Signature, Date</p>

Appendix 2: Transcripts

1) Interview Christian Braunsberger - Meeting Recording

11 April 2024, 12:02PM

24 min. 8 sec.

Chiara Elisabeth Carola Schorbach 3

:42

President of Social Media and I wanted to ask you for which areas, so what exactly?

Speaker1 3

:54

Well, we're a big media house, which means that we have something to do with social media in every nook and cranny. I'm responsible for all of them, our channels and format pages.

Organically, why organically?

Organic is what you do and giving the community added value without putting money behind it, so I can now go and play out a trailer for a quiz show on Sat1 to 1 million people and I haven't even scratched my own community with it, because I've set the targeting in the paid area so that it just goes to the people everything we do is more or less public and without using money and that's what we do and that's a special feature, or rather with the

special feature but differentiating it from non-media companies. My team does that for Facebook's for Instagram and for tiktok partly still for Snapchat there we have a monetisation style.

What we don't do is Twitter, which pretty much every other media team is always somehow involved with some kind of social media channel.

The channel is always more in the B2B

area for us, what we don't do is linkedin, because that's corporate communication and what we don't do either and that's just historically through Studio 71 and all the creator and then youtuber network stories, is actually youtube.

Chiara Elisabeth Carola Schorbach 5

:14

Okay.

Speaker1 5

:15

And then you even have to differentiate between editorial and strategic responsibility for the formats and channel pages, I'm not editorially responsible for our factuials group. They have their own editorial team and therefore have editorial sovereignty, which for us is taff Galileo Frühstücksfernsehen Abenteuer Leben and, of course, Newstime with news.

I have a colleague there who really provides strategic support, i.e. daily support with reporting, says what's new on the platforms, says Do XY cut the filter on a video and so on and so forth, but we wouldn't talk them into whether you interview a Lauterbach or Robert Habeck. Whereas with a format like Joko and Klaas, if you somehow have 5 influencers on the programme, then we already make a clear statement in the briefing: I'd like motzi mabusi, we're really heavily involved editorially or are editorially self-directed, and with factuials we can't and aren't allowed to do that, there's an editor-in-chief.

Chiara Elisabeth Carola Schorbach 6

:23

Yes yes because I worked at the DMPC for 6 months from July to February.

Speaker1 6

:31 With Andi Stumpf yes.

Chiara Elisabeth Carola Schorbach 6

:32

Yes, exactly for 6 months and I thought it was super cool, but I only did Taff and Frühstücksfernsehen back then, but I definitely want to come back at some point, so I did all that, so you're already working with artificial intelligence?

Speaker1 6

:52

Yes, yes, it's been like that for a relatively long time and I think you have to look at the topic of artificial intelligence in the field of social media, it's very, very often integrated into tools and only when the whole AI hype started was it regulated by many tools, so we've been using it for two and a half to three years, for example, we have, this doesn't

concern my department now, because that's also a special feature of our social media, the whole topic of community management is in the audience editorial department, They are called audio relations, but as an example, there is simply a tool that scans our millions of comments and sorts the background with an artificial intelligence or a machine learning whatever you want to learn, so that we know that the comment I didn't like on the programme comes from Anneliese Huber from Bayreuth with 3 followers.

Or the comment makes less advertising comes from the Berlin hipster XY with 200,000 followers?

So this is actually sorted by an artificial intelligence in the background with really urgent, high .

The whole sentiment analysis works with artificial intelligence, so is this a positive negative neutral comment or maybe even a security-related comment?

There are a lot of things in use that weren't labelled as AI back then and that are claimed now, so there was a day when we were following our to-dos and suddenly there was a turquoise button with AI and a magic wand, but nothing has changed in terms of the tools themselves.

C

Chiara Elisabeth Carola Schorbach 8

:16

Mhm.

Oh okay, very interesting and what strategic goals did you pursue when integrating AI technologies into the platform, i.e. how are the goals in line with user engagement and satisfaction?

g

Speaker1 8

:47

In the text area, we have the possibility in our tool to write texts and to have them rewritten in the same way as in Chatgpt, so our social media publishing tool is such that you enter a text "Today at 20:15 o'clock on prosieben the programme XY" and then you can tell it to make it shorter, make it crisper, make it for Gen-Z, make it with emojis and then an AI converts it and we have actually used that and it has a relatively big impact now not so much because the AI is better than what we do, but because we simply let the AI find other text modules that we would otherwise somehow not use.

And the algorithm is so clever that if you give it something several times, it will penalise you at some point, so it's not measurable in terms of engagement, because it really depends on the asset and then the message, but it is measurable in terms of reach and it has had a very positive impact, plus it's more individual and time-saving.

C

Chiara Elisabeth Carola Schorbach 9

:36

Yes.

g

Speaker1 9

:54

You asked about the strategic points.

C

Chiara Elisabeth Carola Schorbach 9

:56
Mhm.

Speaker1 9

:57
Increasing range through new technology? Saving resources and efficiency.

Chiara Elisabeth Carola Schorbach 10:08

And how did you realise that the indicators went up when you were working with AI and the texts? What did you notice then?

Speaker1 10:23

You realise that your average organic reach of the postings but that's not the case with all formats, so with a Joko and Klaas, where the Berlin editorial team writes that they can do it better than an AI because they know how their followers want to hear it, but with a classic quiz show from Sat1 or today's "mein Lokal, dein Lokal" you're at some point at the end of your creativity.

Chiara Elisabeth Carola Schorbach 10:48

That's right, and that also saves time for the editors. Do you have any kind of controlled personalisation of content?

Speaker1 11:03

No, I didn't.
That doesn't exist either.
Social My news fit is public for everyone and in social on the feed-bound social platforms Facebook's, Instagram and Snapchat Discovery is not possible at all, because everyone can see everything. So we always make our content public and not in the closed group. It can't even be possible on TikTok because the platform is structured completely differently. It's not what's known as social sharing, it's contact, there's no individualisation at all, so it's more for the paid social media sector, but our colleagues aren't really involved with it or not at all.

So I can tell you for sure that there is no one, because I am in an AI circle, where the marketing decision-makers from all industries are involved, there is no one who says we have ever managed to do anything personalised via AI.

Six weeks ago, however, there were people from Bayer to Audi to Deutsche Bank who all said that this is the goal, but we are not there.

Chiara Elisabeth Carola Schorbach 12:17

Mhm umm, how has AI changed the way users interact with platforms, i.e. with social media platforms and online platforms in general?

Speaker1 12:28

Yes, not at all, until you add healthy scepticism but you always have a scepticism on social media everything was somehow nicer and every woman has the more expensive handbag than the other woman and the more expensive jewellery and you basically show yourself one way or another, the way you want to be on the outside, But that's nothing new, this danger has always existed and we've been aware of it for 5 or 6 years and whether you look

at it now, whether someone is putting their life on hold or putting their life on hold with the help of generative AI, it hasn't made much difference.

And it's usually the case with these very close formats from creators, where you can see relatively quickly what's fake because it's actually a deliberate stylistic device.

Chiara Elisabeth Carola Schorbach 13:12

C

Let's talk about the challenges now: about AI, for example, what are the challenges in social media and online.

Speaker1 13:25

⊗

Privacy, tagging, not in terms of how can I tag this and my users take off, but how can I tag this without the platform penalising me because every text in any asset or every source citation is damaging? Then at some point, in the long term, the issue of reach, when you are forced to tick a checkbox by the platform. We used AI and you implement it honestly who knows what they do with the info?

Chiara Elisabeth Carola Schorbach 14:02

C

Are there any outstanding, AI, projects or initiatives that you could tell me about, so for example I know a bit about the GenAI playground I don't know if so are you working with that as a social media team 4?

Speaker1 14:13

⊗

Yes. Yes, so we work a lot with it for production briefings for creative briefings for "Schlag uns Creator", but it's actually nothing new for us, so before we introduced the Playground, people knew I could go on Chatgpt and ask questions. It's also not that helpful for us as prosieben or my team will already be using social, because they can write clear briefings, it's better to ask questions for any shoots. But when it comes to strategy, we are always first movers, which means that the things we already know about the platforms are not yet on the Internet, because we usually find out about them somehow beforehand and then it becomes difficult, because we very, very often build our strategies around, let's say, functionalities of the platforms that are not yet publicised.

Let me think about it.

What are we planning?

We're actually having a bit of a rest right now. Why is that? Because my social media team are marketing people, but they work a lot with the Adobe Creative Suite and because our creative team and Adobe are strong partners and we can all access the same software, which is cloud-based, we automatically have all the functionalities that the creatives need in terms of GenAI and all the additional tools that make us more efficient.

They are automatically available to us, and my expectation is simply, and this is also part of the anchored goals of every employee in marketing, that they will actually use these things to the maximum. There are various tools, mainly based on Chatgpt, that help us to cut things around. You put in 15 minutes of 16 to 9 video, click on a button, say the target audience is 20 years old, I want emojis in it, I need subtitles in the following language and then it throws out youtube shorts that we test and watch. However, they are all very small players that are very, very difficult in terms of data protection, because you give them intellectual property and don't know what happens to it.

That's why we tend to take a step back, because we know that if we have access to Chatgpt

4.0

in the Playground, which is kind of the basis of the whole thing, and if we have access to the Adobe Creative Cloud market in the area of creation, then we shouldn't use anything. That actually only uses these 2 things in combination, but we should learn how to use the source tools. Source tools, because they are really clean for us in terms of data protection, information security and so on, so that we can do it ourselves at some point.

Chiara Elisabeth Carola Schorbach 17:09

C

Mhm and if you now talk about the ethical, so there are still a few challenges, of course, but do you have any guidelines or principles that you have to follow when it comes to artificial intelligence and how you regulate it on the platforms.

Speaker1 17:25

⊗

Well, first of all, we don't do anything that's somehow not legally compliant and we have a new, relatively clear directive from the EU, which the rules have also presented to us all. This brings us back to the same topic: if we use the tools that have been approved by our data protection and information security departments and then also legally, then we are on the safe side. Then there are also labelling guidelines for licences. However, we rarely come into play here because we receive the marketing traders from the creative department and do the things that we accompany, so there's nothing that you have to label at the moment.

It's not like we have a Heidi Samba dancing on Germany's next Topmodel and then we say GenAI here's the source video and please let her breakdance - we don't do that because we can't spoil the format in any way.

So we're still a bit on the outside.

Chiara Elisabeth Carola Schorbach 18:19

C

Okay, yes, I think that's perfect, so it doesn't necessarily have to be that a Heidi has to breakdance.

Speaker1 18:26

⊗

That's just it, it's just far too much hype and especially the young people, I have a very young team, everyone has seen this video of the monkey that's kind of candy floss, yes, be careful, it was created by a super computer that somehow costs half a million euros and it took 8 to do it.

Chiara Elisabeth Carola Schorbach 18:29

C

Yes, it's the same as with music and so I mean, it can already somehow make its own songs with melodies and so on and you hardly notice that it was created by the AI, so that's incredible.

Speaker1 18:47

⊗

It also depends a lot on the platforms, because they're not stupid either, Facebook has known for 10 years whether a photo you take of a camel in the Sahara is the same photo that you took before of a jeep safari.

They know the metadata from your phone, they know which speck of dust is on the lens and then know that this is real content or copied from somewhere.

They will therefore be smart enough to distinguish between AI and a real moving image. So we just have to see where AI can help and where it can't?

And then ethnically, what are the things that are important to us, for example: we have a hot rehearsal for "Masked Singer" and there's a hot rehearsal where you're already wearing the costume, which is then actually shown in the programme, so it can happen that someone tapes off a cable in the background, but I don't find it ethically reprehensible that I use GenAI from Adobe to remove the cable from people in the background. I also don't think that anyone needs to know that - e.g. I have to label it in my text. You also have to use a bit of common sense.

Chiara Elisabeth Carola Schorbach 20:07

C

Yes, that's right, that's right.

So if you've already talked about the fact that you've also spoken to other companies about how AI can be used, do you know how ProSiebensat 1 compares to other media players in the online media industry when it comes to artificial intelligence?

Speaker1 20:25

⊙

Relatively good why relatively good when we've had a good partnership with Adobe for a long, long time. Adobe is the key player for us in the field of AI, but I can only speak from my area of marketing and creation.

I can't tell you what happens in our former PTS or what happens with other colleagues, so I have no idea whether any of our legal team has ever thought about putting a legal text or a contract into Chatgpt and saying okay, let's analyse it.

It's certainly not yet so measurable for us what AI brings us, but in other industries it's quite different. Especially in the e-commerce sector, if you then somehow, I don't know, don't throw in a hundred Excel lists and say: "Give me the 10 products that I should offer at a lower price at Christmas so that I can triple my sales", that's where they are strong. I don't want to go out on a limb and say that we don't have the data to really utilise it to the full for ourselves. But I also don't want to say that we have the data and utilise it to the maximum, like with Joyn, for example, to buy the right formats, but in my area we are very far ahead when I look at how long we have been working on this and what tools we have in use. We are not slow in that we try things out relatively quickly and also have a direct line to Legal and our data protection officers.

Chiara Elisabeth Carola Schorbach 21:51

C

Mhm, that's good.

So when it comes to so I can talk about it now, but has the integration of AI had a big impact on business results, sales, market share, brand perception?

Speaker1 22:07

⊙

I don't think you can say yet, so it's super difficult to measure overall and again for my area. German television had the big problem with measuring ratings and some 1000 boxes that are in some households. I can't tell from social media what it looks like either. The Voice Kids now has a clip with a hundred million views, will the ratings go up if a hundred million people have seen the clip?

Where do you want to depict this journey or what is the journey

like anyway? Is it from tiktok to youtube from youtube to the other long-form format and then watch the programme on TV, do people stay on Joyn, do people stay on 15 minutes of

video and what part of our trailer does AI play there?

In the long term, it will probably have an impact on costs, which will be lower, and then there will be a positive business result again.

So even there I honestly have no idea, I don't know what an Adobe licence will cost us in 2022 and whether they will have increased their prices in 2023 to get all the AI stuff. And is that one person I'm saving or 10 people I'm saving, I think only time will tell.

Chiara Elisabeth Carola Schorbach 23:09

Yes.

Yeah okay, so just way too early to determine that most likely.

Speaker1 23:20

So for us as a TV house, it's far too early, because last year, for example, Adobe focussed very strongly on the topic of image, this year they've clearly said that all the things that have been presented will be shown in moving images and then it will take time. You know how long our productions take, so I reckon you won't see the first positive impact until Q2 next year at the earliest.

Chiara Elisabeth Carola Schorbach 23:22

Good, perfect, thank you so much for your time.

That's it already, yes it went super fast.

Speaker1 23:46

That was all clear, good, thank you, Chiara all the best.

2) Director M&C – Strategy & Innovation - Meeting recording

15 April 2024, 07:59AM

36 min. 59 sec.

Chiara Elisabeth Carola Schorbach Transcription started

Chiara Elisabeth Carola Schorbach 4

:09

What is your exact task?

Director M&C – Strategy & Innovation_4

:15

is in the entertainment pillar. That's another area and in the Marketing Creation department, our department is responsible for bringing the formats that run on Joyn and on the TV channel to the man and woman in the best possible way. We create the campaigns for this, we also create the advertising in-house and this is organised in such a way that we have an internal marketing team, a creative agency and our own project management.

And then, of course, there's B2B, i.e. everything that we do directly business to business. Acquiring customers for the sales area.

And I am specifically responsible for strategy and innovation and, as part of that, I am responsible for the topic of artificial intelligence at our company and I think my job can be

summarised as follows: together with the managers, I try to answer the question of what really effective impactful marketing will look like in five years' time and then we develop the strategy, the development strategy of the division, so to speak, in terms of what steps we need to take to be top of the game in five years' time. In the area of AI, in the area of marketing and customer communication because of this.

There is then another separate area, that of Benjamin Restaurant, which is responsible for the platform and all communication on the platform, i.e. which pack shots are played out and how?

It goes hand in hand, of course, because we generate conversions on the platform. Through digital marketing, for example social media marketing.

But everything that happens on I'll say that when you open the app in the browser or on the TV or whatever.

Chiara Elisabeth Carola Schorbach 7

:20

Okay, I can also read out again, then you just pick out the questions, whether you can answer them or not. Let's talk about the AI implementations on the media platforms.

Director M&C – Strategy & Innovation_7:53

Hm.

Mhm okay, okay, so one area where we are relatively advanced is the area of advertising material ordering, i.e. when it comes to the creation of advertising material.

It's mainly in the direction of saying how can I scale the creation of advertising material with the help of artificial intelligence.

Of course, this is where the entire development of GenAI is heading at the moment.

For us, the trick is not just to automate, because I'm going to take the automatic resizing of different banners, for

example, which you used to have to do manually and which somehow took up an incredible amount of time, but which is now literally at the touch of a button, so incredibly high savings in the area of efficient working, I would say these are the low hanging fruits. when it comes to the up formatting of the existing creative?

But also in the step before that, if you think about it at all, which creative appeals to the target group?

Of course, artificial intelligence is one of the big starting points for idea gardening, so it's really easy to say, hey, which one, what does the AI play back to me on the basis of various prompts that I write and briefings that I put in and maybe somehow the brilliant idea comes up that matches with an insight that we have for the target group, so I would say that these are the 2 big construction sites in the creative area, so firstly the development of the advertising material in general, i.e. the idea of it, and then the second this great automation effect. The third is AI, which makes things possible that simply wouldn't have been possible before.

It starts with, for example, when we do a photo shoot and want to take pictures of our faces from formats. Normally you build a set, so that was really something physical and nowadays you can make super expensive sets, but these are just AI-generated in the background or what would not have been possible in the past, for example, if we receive raw material, audio sequences or video sequences, from which trailers, social clips are then cut and they are of poor quality, then you can easily restore good quality with AI.

In other words, in the past we would have had to reject these things. And now we can just use these pieces.

C

Chiara Elisabeth Carola Schorbach 10:55

Does poor quality now mean above all what exactly is blurred or you can't really understand what is being said?

SE

Director M&C – Strategy & Innovation_11:03

Exactly in the audio area, for example, it can be that the recording quality is poor because it's just somehow just or that other people are talking behind it or you have a high level of background noise or or it can also be that you say I want to use a sequence from the film from the trailer and there is background music over the sequence and I can now easily filter out the background music with AI and have the voice very clearly because I might want to put other music behind it in the trailer. So you didn't really have this flexibility and these options before.

C

Chiara Elisabeth Carola Schorbach 11:39

So what are the strategic goals?

Why do you use AI at all?

In addition to efficient work, blue closed.

SE

Director M&C – Strategy & Innovation_11:57

Hm.

Yes, so we actually have three things that are a bit repetitive now.

On the one hand, it is actually primarily efficiency gains, but this will only really have a major impact in the first few years.

After that, it really is an increase in quality. And above all, an increase in quality with regard to the individual customer approach. Because where we want to get to is not only automatically generated advertising material for each individual, but also a partially automated approach using another AI.

The vision behind this is an interplay of three different types of AI, and we are now moving away from the direction of GenAI, which is very strongly focused on the creative area, and towards Applied AI, which works more in the machine room, so to speak, analysing the data and making recommendations for action, starting with the customer database.

So, for example, we have you Chiara, you are in our customer

database and based on a user's behaviour AI will at some point identify hey, if we show you a pack shop with the female lead from the TV show on it, you are three times more likely to watch it. VS if we show you the old male ones. But that's something, of course, if you go to the individual level, no single person can do it anymore, because this is totally away from mass communication to the approach that is most relevant to you, and that's one part of this AI that is not only descriptive, i.e. describing what you are like, but also predictive, predictive, and then above all prescriptive, what actions need to be taken to write to you.

And the last point, which are the 3 expansion stages of analytical AI, is prescriptive.

I have a prescriptive AI, which then tells the next AI, the generative AI, which advertising media creation is responsible, which advertising media do I have to produce for you Chiara, of course taking into account the brand guidelines for the respective format, so

that's always on brand, but totally created individually for you and then we have a third AI and that's about the control of the advertising media, because I have to know where to find you? Is it a social creative, is it a pack shop, is it a banner, is it a podcast episode where something is displayed on Spotify, which means that at some point it should work relatively automatically so that this third AI then learns from the first AI again where I can reach you Chiara? Where is the highest probability, at what time of day et cetera et cetera, that you will also see the creative and it will grab the advertising material from the second AI, so this interaction, that is the vision, that is where we want to be in 3 - 5 years and that is more important to understand, but I think you have to differentiate between always-on communication, the communication that runs continuously, which I have just written, and highlight communication, so if you're doing large campaigns or have these upward spikes in addition to what is basically the background noise, that's certainly where there's less automation, where people are much more important in order to utilise this large budget, including of course with AI support, but this vision is specifically for everything that I'm now saying is always on marketing.

There's also something like I see it's your birthday, you're not a subscriber yet, I send you an automated special offer with a reference to the series that's behind a paywall and no marketing team ever has to attack anything and you get the communication automatically.

Chiara Elisabeth Carola Schorbach 15:59

C

So doesn't it go a bit in the direction of personalisation for the respective person, so for me, for example, that's really cool.

Director M&C – Strategy & Innovation 16:23

SE

Good, yes totally!

That makes it possible and I think personalisation is possible in different stages. It starts with images and then moves on to material.

Maybe 50 years have customised TV programmes on.

Even when it comes to avatars of artists. In the future, if you Chiara are now a Face, like a presenter on prosieben, then you won't actually come in yourself every time (to the studio) for a trailer and make some kind of announcement to say: "Hey then Monday 20:15 o'clock" but you'll stay at home all chilled out because you've ceded the rights for your AI avatar to us, it looks exactly like you down to the last hair and has your voice and you'll just check whether what your AI avatar says is fine for you, but of course you'll still get paid.

Chiara Elisabeth Carola Schorbach 18:45

C

If we talk about now, like when you talk about when these technologies and when it's my birthday, it sends me this email for example, so how has AI changed the way I interact with the platform as a user? So is there a duration or frequency of user sessions?

Do you know anything specific about sessions?

Director M&C – Strategy & Innovation 19:16

SE

Not specifically related to streaming, but there really are various studies in the e-commerce sector that show that listening to personalised content triggers conversion rather than engagement.

That's also the reason why you say yes no-brainer, that's where it's going, because the more relevant the cosmos is that's tailored to you, the more time you spend in it, I can't give you

any figures or any experience reports because we're not that far along yet, but it's definitely clear from other industries that this is the way forward.

C

Chiara Elisabeth Carola Schorbach 20:00

Okay, what kind of challenges did you encounter with AI and how did you overcome them?

SE

Director M&C – Strategy & Innovation_20:12

As an early dawn no, it's I mean AI has actually been around for a long time, but I would say it arrived in the mainstream about two years ago and it feels like every week is somehow a new breakthrough and, above all, the legal situation is of course an immense challenge.

For companies in Europe in particular, where regulation is even stricter and one of the biggest challenges is certainly to react to it light-footedly as a group, to actively and lovingly work on being able to utilise these technologies for yourself, but also to secure yourself to a certain extent.

I think this is a huge challenge that all companies in Europe are currently facing, especially corporations.

Start-ups are perhaps a little freer in their handling, and I think the second big challenge is that if you have a mega well-maintained database, then AI is the magic fairy dust that you sprinkle over it once and it catapults you into immeasurable performance and impact, but for that you just have to have done your basics and homework.

AI can only be as good as the data that you provide and that you have, and I think that's the second major challenge in the application of applied AI, which is simply doing the homework, setting up the tracking, and of course collecting what we can potentially know about you.

Of course with consent and everything clearly under the corresponding privacy guidelines, but then to make it usable.

And the challenge is certainly to bring together various data sources again, I'll say the personal data of users is an issue.

Then there's campaign performance data and product data, and all these things, bringing this knowledge together and training an AI to make smarter deductions and smart insights based on these various data sources and then create better performing creatives, better performance, that's the big key and the big challenge for them all right now.

C

Chiara Elisabeth Carola Schorbach 22:48

When it comes to negative warnings and perceptions of AI, especially from the user, I also have to build up a certain amount of trust in the user. Have you experienced any negative perceptions regarding AI or not yet?

SE

Director M&C – Strategy & Innovation_23:13

Yes and no.

For example, we at seven.one Audio, who make podcasts, have already made completely AI-generated podcasts and it just doesn't perform well, so the call-up figures aren't that good, because I think it's strange for people when an AI has come up with a story. An AI narrator reads it to you and stuff. I think the closer we get to a certain personality that we want to know, that we want to trust, the higher the scepticism towards something like that, let's say, for example: We make a poster, let's say Germany's next Topmodel next year,

Heidi doesn't have to go shooting anymore, but we have her as an AI avatar, we can make mock-ups where she has photos of herself standing there. I don't think it makes any difference to the customer, because when they see Heidi in a photo, on a poster, the truthfulness of the statement is still the same as if she were standing there herself.

But if you do a behind-the-scenes interview with Heidi and put her words in her mouth, it's not the real Heidi Klum, then I think you have a dissonance, because I think as a human being you want to hear the opinion of that person and not what some other editor has scripted and put in the avatar's mouth. That's how I would assess the state of mind at the moment.

But that will gradually change the more people are used to interacting with digital avatars of people, especially if you can't tell the difference at some point, i.e. you would have the same conversation with my digital avatar as you have with me now and I could of course do something else in the meantime, so at some point I think it will go in that direction, but at the moment it's still a trust issue.

Chiara Elisabeth Carola Schorbach 25:17

C

Mhm.

I think that's quite interesting to know because of my age, for example, that I'm not really interested in someone who works with Chatgpt or my father or even my grandma. So do you think that has something to do with my age or more to do with the fact that maybe I just want to work there and my dad just doesn't?

Director M&C – Strategy & Innovation_26:03

SE

So without being able to prove

it to you, that's my personal assessment of it, I would say yes, of course you see a clear progression, the more you go into the area of the older generations, the greater the scepticism, because they grew up differently, were socialised differently.

I think my generation has experienced the digital transformation enough that we have a certain flexibility in our mindset and are better able to keep up with the speed at which the world is changing.

I think it's more a case of being overwhelmed in this area and I believe that when it comes to tapping into such target groups, the clear benefits and simplicity of using AI must be prioritised.

I think it's less about them saying they're proactively interested, but I think now, if you somehow have Siri as a corresponding avatar or Alexa and I can have a totally human conversation with it, then it's absolutely something for older people suffering from loneliness, for example. Nevertheless, it will open up a huge market in the older generations.

Chiara Elisabeth Carola Schorbach 28:03

C

Yes, that's right, when we talk

about upcoming AI projects and initiatives, do you already have something in mind and does it perhaps also have something to do with user engagement and satisfaction or can you give any details about any upcoming projects?

Director M&C – Strategy & Innovation_28:25

SE

No more than I outlined to you earlier. Where we want to go it's simply too sensitive for that, in terms of the topic, but yes, definitely towards personalisation. Making greater use

of data, creating more advertising material that is needed for a personalised approach and that's the way forward.

But unfortunately I can't tell you that specifically.

Chiara Elisabeth Carola Schorbach 28:55

C All good, no problem Do you have any ethical considerations regarding the use of AI?

Director M&C – Strategy & Innovation_29:02

C Yes, exactly, we have already developed our own ethics charter for the entire news section, for example, which was launched this year, because it is particularly important that news is trustworthy, that you are truthful, that you don't somehow show war images of Ukraine generated from stock photos, for example, when you make a report from Ukraine, because people have to be able to trust it and also trust our journalistic duty of care.

And if something is generated for illustrative purposes, perhaps not in the area of wars on a less sensitive topic, then we will also proactively label it, i.e. it will be shown.

Although the regulation, i.e. this AI EU Act, does not provide for this until 2026, that it will then be labelled, so in any case and we are also discussing how we want to deal with it for the other use of AI ? So this exchange on ethics is definitely taking place. And also guiding principle is always as long as we don't mislead our customers, as long as we don't distort a message as it was intended in the original, we are a little less questionable.

Because the question is also where do you start? You can say, I mean, if you now use, let's say, Photoshop. In the past, when you cropped a person. That was super time consuming, you had to cut it out and so on, and now it's just at the touch of a button, but it's AI. Firefly at Adobe is already AI generated. So, because the creative performance doesn't change. It might be different if I want to generate a different background, is that relevant information, do I have to say "Hey, the background has been generated with AI?" or does the customer not care, and there are now attempts in the media industry to proactively establish commitment from all television broadcasters and media companies on how to deal with this. Before there is some kind of regulation from politicians, for example, because we fundamentally believe that it only makes sense to clearly emphasise this in certain cases and in many cases there is no added value because there is no kind of misdirection or distortion of the message.

Chiara Elisabeth Carola Schorbach 31:44

C If you talk about it now, so if, for example, with the background, you characterise that, because I mean, that was a small, so the question behind it, but do you do that or don't you do that?

Director M&C – Strategy & Innovation 31:55

SE At the moment it is not labelled internally but externally we would not, if we publish a poster and the background is AI generated we would not label it at the moment. Because the labelling obligation does not yet exist, but this may change as soon as the industry agreement is reached.

No, because then, of course, we would adapt to the industry standard and from 2026 it must also be clearly defined when, where and when not to label. But that's only just being finalised, so the EU AI Act only says that you have to, not how you have to, for example, or what the wording is or how big it has to be.

C **Chiara Elisabeth Carola Schorbach 32:20**
Do you know, for example, how other media players and other media houses use AI and give ne?

SE **Director M&C – Strategy & Innovation_32:52**
Well, yes and no, so nothing that I've seen at conferences and trade fairs, they all follow a similar path, but I can't speak for them.

C **Chiara Elisabeth Carola Schorbach 33:03**
Okay, it's clear, so I mean, from a few sources you can say that the company is actually generally relatively far ahead when it comes to deployment and considerations and than other media houses, for example.

SE **Director M&C – Strategy & Innovation_33:12**
Yes, I think so, yes, we were the first in Germany, for example, to talk to Adobe about the fact that we have to be able to create corporate identity-compliant advertising material with Firefly.
Well, if every employee now theoretically has access to Firefly, then of course we want, for example, the image language that we have defined for a group to be maintained, so we have also received feedback that we are the first to have played this stuff and are actively pushing it.
I think when I go to conferences and realise that it's not all that new, I notice that we're doing quite well.

C **Chiara Elisabeth Carola Schorbach 33:56**
Do you already have any idea how it will affect the business results, so probably not yet? So that's most of the answer actually to that question, which is just way too early to talk about.

SE **Director M&C – Strategy & Innovation 34:13**
Yes.
Yes, great.
Yes, I'm glad I could be helpful.

3) Nicolas Ebner Interview - Meeting recording

9 April 2024, 01:03PM

23 min. 6 sec.

C **Chiara Elisabeth Carola Schorbach 0**
:45
Be good ok um, then I would just start, so for the first question when it comes to the overview of the AI implementation can you describe how it was then mainly integrated into the online media platform and in which areas the AI was used the most.

NE **Nicolas Ebner 1:05**

OK, I can tell you about my project where I was involved, mainly about that, so I was involved in the Gen AI Playground and that was a bit different than probably the traditional AI that you're asking about now and that is we tried to make AI models like Chatgpt and the same thing from Google and from Amazon accessible for the employees, taking into account data protection and also taking into account that the users are not necessarily all experts in the field and trying to make it as easy as possible for them to use in the direction of image generation and tech generation. But the platformers are of course planned to be even bigger in the future, so if something like text to video and so on comes along, then we would have integrated all that, but we haven't got that far yet.

C

Chiara Elisabeth Carola Schorbach 2

:07

But that will come, maybe that will come, text to video and video to text?

NE

Nicolas Ebner 2

:13

The thing is that we can't develop it ourselves, so to speak, but we are dependent on the big players in the field, if it's Microsoft Google, who have an infinite amount of data and then create the models for it, so no prosieben can create something like Chatgpt.

C

Chiara Elisabeth Carola Schorbach 2

:23

Mhm.

Yes, okay, yes, and of course that's clear.

And the strategic goals, i.e. what strategic goals were pursued when integrating AI technologies into the platform?

And can you, of course, it was only internal, but did you see any commitment or satisfaction?

Even the internal ones don't necessarily have to be the users, because they don't really exist yet.

NE

Nicolas Ebner 2

:57

Firstly, the core of prosieben is content creation, so everything that prosieben and the family business does is to produce content and to market and sell the value, we were in the area of Gen AI, which is the AI model for generating new content.

That means text, images or anything else, so I think the topic of Gen AI is very important for prosieben and then you definitely have to stay on it and not be left behind and what was then the hope or strategic goal was that these solutions would make the employees whose main job was to create content more efficient, that you could replace repetitive tasks or have them done by an AI.

But also to make the impossible possible, for example to create more creativity, to create more output from fewer people, which was simply not possible before. In image generation, you can generate ideas much more quickly and then see how you can realise them, so it really is an increase in efficiency for prosieben.

C

Chiara Elisabeth Carola Schorbach 4

:25

Yes yes, in any case you can say something about the user connection, so in general, so if we look at these 3 questions now, because I've now also spoken to Sebastian Döring, then you can of course probably know exactly and he said he can say something about it, but he can't really say much about it now, because there is really somehow a team that really specialises in it.

C

Chiara Elisabeth Carola Schorbach 4

:52

But I don't know if you've had any contact with it or not, so maybe you can have a look at the questions.

I can also go through the questions as you like.

NE

Nicolas Ebner 5

:03

Mhm well, Sebastian Döring was basically my boss, he coordinated the entire AI department and I was then in a team from the AI department. In my team we had the GenAI playground. I can't say anything about how it was done from the start, no matter what. I can tell you that we went live with it in November 23, so that's when we said that all prosieben employees could access it and since then we've had steady growth until April, when I finished, so there were actually more users every month. This shows that the interest has not somehow stagnated or become lower, but it has been steadily increasing because we first had to publicise it in prosieben so that people know that they can also use it and then integrate it into their workflow and by the end we had around 300 recurring weekly users. Secondly, together I think about 7000 people had access to prosieben with assets and of those 1400 tried it from November to April and 300 of them came back every week.

C

Chiara Elisabeth Carola Schorbach 6

:17

OK.

Mhm okay, yes, super interesting, it's really incredible how that has built up. Are there any challenges that you have encountered in increasing user satisfaction through AI or have you overcome them or are there any hurdles?

NE

Nicolas Ebner 6

:59

Yes, one challenge is of course that the user problem is that you don't really know how much experience they have with it.

And do they even try it out? So, for example, our challenge was that even a 50-year-old Günther from production, who somehow feels like he's sitting at a computer for the first time, can handle it well, but just as well, there are the experts who have worked in our team or who are very interested in it, who then want to use it and for us it was always a challenge to involve all kinds of people, so to speak, to make it accessible and usable, even for those with less experience, but just as well to create value for people who already have

experience in the field. So the difference between the employees is huge, ranging from keen interest to top updates with everything that's going on.

C

Chiara Elisabeth Carola Schorbach 8

:09

How does the use of the platforms affect user trust and data protection?
So what steps have been taken to mitigate negative perceptions?

NE

Nicolas Ebner 8

:25

Mhm, you could perhaps say that all the employees knew about Chatgpt, they would of course also like to use it for their work. The problem is that we are actually prohibited from using the normal public Chatgpt with internal company data, because data that you put in there can also get into the outside world. That's why the initiative came from our GenAI Playground, where it was said that data protection is actually the top priority for the platform, so that users can actually go on the platform and do anything they want and be sure that they are OK in terms of data protection. Unfortunately, it's not that simple, even if we have contractually agreed with the provider that they won't use the input we provide for training and promise to protect our data, there are still problems in this area from our side. It is still forbidden to put any names in there and there are still restrictions, even though everything should actually be allowed.

And that was always difficult

for us as a development team to keep track of, because none of us were legal experts and Legal didn't always have the right answers because it simply wasn't yet fully developed from a regulatory perspective.

C

Nicolas Ebner 10:09

NE

But these data protection issues were always very present. Data protection is mainly about input - what do I put into the model?

So the output, aslo

, is a copyright issue, i.e. what am I allowed to do with the images that I have created, then it is also difficult for us to pass this on to the employees, so to speak, as with what are you allowed to do with generated images?

Because it was not one hundred per cent legally definable or mature.

These were definitely the biggest problems we had, but the initiative of the GenAI Playground was to solve them in a centralised way and to give the employees as little work as possible with what am I allowed to do and what am I not allowed to do?

C

Chiara Elisabeth Carola Schorbach 11:06

Mhm, okay, are there any other AI, projects or initiatives that you are involved with in general?

Not necessarily anything to do with user satisfaction.

But what is perhaps still planned in general.

NE

Nicolas Ebner 11:26

Mhm was the question asked
for the entire AI department or for my team?

C

Chiara Elisabeth Carola Schorbach 11:36

Is there a difference?

NE

Nicolas Ebner 11:38

I can't say too much about the entire AI department.

Prosieben has already tried to filter out

at least high value AI use cases, so where do they have to pay attention? What will be important topics in the next few years?

I can't give you an ad hoc list right now, but there were topics such as Dubbig, where a video that I translate is translated so that the mouth moves correctly with the translation.

Texts to video, of course, which is now also really on the rise, which works better and better and will probably have a more mature model on the market in two years' time, where you just say create a video. Where we also played a short period of time was text to music. That actually worked relatively well.

C

Chiara Elisabeth Carola Schorbach 12:51

Yes, I recently listened to a song from the podcast that I always listen to in the morning and then you just had the AI create a theme song for the podcast, as if it was a singer singing it

C

Chiara Elisabeth Carola Schorbach 13:27

Um, but if we look at the users, for example, then you would say that it's just things like text to video and Bing, that yes, that's probably also for the user to watch - those are probably the only things where you would say that the user gets something out of AI.

NE

Nicolas Ebner 13:53

Most AI or what it usually sounds like here as AI now sounds a bit like machine learning, the whole GenAI area, which is actually mostly very user-centred, so it's actually normally easy to use for everyone. Simply enter any prompt with text, enter something and there is always a new output generation that is mostly user-centred. Most of the other teams working on problems in the AI department had approached machine learning and had, for example, automated something like broadcast scheduling or automated suggestions for broadcast scheduling so that the broadcast schedule should then be displayed automatically and these are of course topics that influence the direction of a very small user group, but of course still have a big impact.

With the whole GenAI, you have to see what will be the next thing to establish itself on the market, which will probably somehow be text to video, text to audio and yes, text to speech is now also really good, so that you can simply create text or have text read aloud without a human having to do it.

C

Chiara Elisabeth Carola Schorbach 15:21

Yeah, okay blatant and when we come

to the ethical use of AI, so you probably can't say too much now, but how was it, was there

anything considered when it comes to the use of AI and are there any guidelines or principles that govern the use of AI on the platforms?

Nicolas Ebner 15:43

NE

Yes, the AI Strategy Team in particular has been very busy with this. And they also published a very extensive GenAI Guide Lines for prosieben, where they tried to explain as precisely as possible what you are allowed to do and what you are not allowed to do.

Chiara Elisabeth Carola Schorbach 16:04

C

Were they published publicly or were they only published internally? These guidelines.

Nicolas Ebner 16:11

C

I think for prosieben internally, because it's also a work in progress document, because it's also difficult, I think, to communicate that externally.

And the main message was actually that you are encouraged to experiment, so you should try everything out, but for real use you should only use verified tools.

In other words, we had also developed an AI radar, but it wasn't in my team, but it listed all the possible tools that prosieben already uses in the field of AI and also for which news cases they are used, so that you can show where you want to stop, as prosieben allows these tools in these and then there are already used cases, so that if I want to do something with AI, I know can I use it or not?

Unfortunately, most of the tools were rather cautious, so if you wanted to use AI for text music analysis, for example, you should play around with it, you were allowed to, but to really use it commercially at prosieben you would have had to go through a longer process and that's why there were less well ventilated.

NE

Chiara Elisabeth Carola Schorbach 18:06

C

How is the use of Ki prosieben compared to other players, in the online media, industry or a general media you can not say probably or?

Nicolas Ebner 18:20 Unfortunately,

NE

I have no insight into what it's like at other media companies.

Chiara Elisabeth Carola Schorbach 18:24

C

Yes, maybe you were just talking about it or something, that would be what interests me, otherwise I could do other things online.

Nicolas Ebner 18:31

NE

Well, unfortunately I can't say much about that, I can only say that I was there at prosieben, now here through Project **Horizon** and so you probably know that everything has been restructured a bit and that the now here Focus the AI was already really relatively present in all strategy discussions and all meetings that were held, it was said that prosieben needs or must become strong in there and has also made it part of its strategy.

C **Chiara Elisabeth Carola Schorbach** 18:56
I had my second day was this meeting where they talked about Project Horizon, it was definitely very funny.

NE **Nicolas Ebner** 19:12
Aha yes.

C **Chiara Elisabeth Carola Schorbach** 19:14
Going there on my second day, especially it was 28 degrees on that day and we were sitting in the tent and I was totally overwhelmed because I didn't understand anything, because if you're not in the company, in the sense of a new month, then you really have no idea, so you can't find out anything about it and that was a bit stressful.

C **Chiara Elisabeth Carola Schorbach** 19:37
But you know what?
The integration you can have it in the platforms, about the user connection and satisfaction on your own overall business results so it's somehow impacted the sales or market share or something.

NE **Nicolas Ebner** 19:52
No, I don't think dat prosieben has any data on it either.

C **Chiara Elisabeth Carola Schorbach** 19:56
Yes.

NE **Nicolas Ebner** 19:58
A major challenge at the turn of the year was when we make software for ProSieben from the AI department, we don't create value, but we cost a lot of money for prosieben and therefore we have to request a budget and in order to request this budget, we have to justify why we don't need half a million to develop this software and that was also a problem at the turn of the year where these budget requests had to be made, that had nothing to do with it, but of course it was the head of the department, Sebastian Döring, who then had to sell, so to speak, ok, we are now launching the GenAI Playground, for example, and we need so much money for it, because we want to generate this value and they had described this value at the New Year with a study by BCG, the Consulting Group, because the GenAI has a turnover of 3 trillion, so I don't know, I don't know exactly how much, but that's exactly what they were referring to. Here and it went through, but it was basically said next time please give more precise facts and why, so it was labelled as too general, so to speak.

So be short, we don't have an exact number ourselves yet. It
's really difficult to estimate
how much value it will create, because we're not sure.

C **Chiara Elisabeth Carola Schorbach** 21:38
Yes okay, I see, we're already at the end.
Thank you very, very much, that was really super helpful, so despite the smaller insights you were able to give me, it's very interesting to hear from someone who has actually been involved in the Playground.

So far I've only had someone who was at News Time and told me a bit about it, because they also worked with AI, even during the Corona period, so it's really cool to find out and hear something from a different perspective, so thank you and if I have any more questions I would contact you again if that's okay with you.

NE

Nicolas Ebner 22:04

Mhm.

That's all right, yes.

C

Chiara Elisabeth Carola Schorbach 22:24

Okay, very good and then I wish you a very nice day and thank you very much for your time.

4) Vice President of Artificial Intelligence - Meeting recording

8 April 2024, 02:14PM

23 min. 3 sec.

C

Chiara Elisabeth Carola Schorbach 0

:05

We can stay with future paths and ethical considerations, or we can go down from the top, as you like.

○

Chiara Elisabeth Carola Schorbach Transcription started

DS

Vice President of Artificial Intelligence

:13

Yes, exactly, so I'll say very briefly, no, I know where we simply use AI, that's for recommendations both on Join our streaming platform and in the publishing area. The publishing area concerns all the websites we have.

Artificial intelligence was used there to recommend content. The aim behind this is of course always to keep the user on your platform, because if the user consumes content on your platform, they will consume content and then they will also be able to watch advertising, which is how we finance our content for the most part. that is also the strategy at Join, not to become a pure subscription-based video on demand, which we also have, but the biggest part is financed by advertising, so A-What, and it is of course important that people consume content. Because adverts are of course always played between the content in the content.

In comparison,

with Swor (publicly funded)

, if someone has taken out a subscription, they are actually consuming content or not, because they are paying for the service, right?

That's why it's important to have a good recommender in this area that keeps users on your platform.

Very, very important, of course.

C

Chiara Elisabeth Carola Schorbach 1

:44
Mhm.

DS

Vice President of Artificial Intelligence

:44

Yes.

And if we now look
at the future development?

Of course there

are considerations, and I think you will also have had for my Netflix account, what they
do, for example, is that they individualise the preview images.

So they say ok no, I know Sebastian, he's so into the market and the content, so I try to use
the preview image to make other content more appealing to him.

But of course you always have to consider, ok, what kind of uplift do I get from that?

DS

Vice President of Artificial Intelligence

:29

Does it really feel like the first step is that I click yes, because I find the preview image
interesting, so I click on the content? In the second step, I stay on the content, so how
much of the recommended content do I then look at, what is my total video viewtime on
this content and based on these parameters you then have to look at yes ok, does further
personalisation and further use of this artificial intelligence technology bring what added
value?

And that is of course crucial for something like this is to measure how well my
recommendation is already working, what kind of uplift can I possibly still achieve or do I
have other problems on my platform. Where it's not even about using this AI technology,
but I might have to do completely different things, so join, for example, has the big
challenge here and there that they don't have all the episodes for certain series, so you no
longer have the AI problem? Which makes you a good recommendation - but you
recommend content that would also interest the customer, but they don't watch it because
episode 1 is there but 2, 3 is missing and it continues with 4 yes.

C

Chiara Elisabeth Carola Schorbach 3

:54

And why are 2 or 3
missing?

DS

Vice President of Artificial Intelligence

:56

Yes, that's simply a licence issue. If you take Netflix again, for example, or does Prime
also have to have this category, only available for a short time? That's simply down to the
licence models.

How long do you licence certain content for?

So before you grab the technology and say ok, what else can you do with AI to drive
engagement and satisfaction even higher. Does it go beyond that or what are they?

What are the fundamental problems?

Yes or challenges that we currently have?

C

Chiara Elisabeth Carola Schorbach 4

:37

Yes.

DS

Vice President of Artificial Intelligence :37

That's exactly why yes, people are now always thinking, no, how can we automate things, but make them even better etc?

But this must always be

preceded by a product analysis - user analysis, user feedback, taking a look. What are they actually pointing out to me, yes.

C

Chiara Elisabeth Carola Schorbach 4

:54

Mhm.

And that's what you look at in your team.

So that's the user feedback.

DS

Vice President of Artificial Intelligence

:03

No, we're not currently doing that in my AI Products team, so as I said, there's actually a separate department for that, which looks at it and then says ok, no, we've somehow recognised a bigger issue here, because out of 500 users, 50% have now somehow said this and that okay, maybe that's something where you look at it and say okay, then there's an uplift behind it. So if 50% of the users who took part in a survey say that this somehow prevents them from staying on a platform for longer. Staying on the platform and that's actually what you should always look at first, so never go off with a solution and then look ok, what problem do I actually have, but always ok? What problem do I have with my platform?

Maybe also that consumers only ever come for one piece of content, consume it and then go away and I have to look at ok, how can I solve that?

Exactly, if you then briefly look at the second topic of dietary AI utilisation, that is of course also a very, very broad field, right?

C

Chiara Elisabeth Carola Schorbach 6

:11

Yes.

DS

Vice President of Artificial Intelligence

:12

Basically, however, we naturally do everything in compliance with data protection regulations when it comes to the use of AI and the topic of ethics in this context...

Yes, I don't know if that applies

so much to Prosieben since 1 and its digital platforms.

But if we take a look

at social media

platforms like tiktok or Instagram,

for example, whose algorithms are so good that you as an adult already have the problem

of detaching yourself from them, yes, but you're stuck in this endless scrolling, then there is certainly an ethical responsibility, especially towards children and young, underage young adults - not to create dependencies on such platforms. But to have a good recommender, but not in the way that tiktok does, for example, where it's really hard to get away from it.

C

Chiara Elisabeth Carola Schorbach 7

:11

Mhm.

That's right.

DS

Vice President of Artificial Intelligence

:20

And of course there's an **ethical** responsibility behind it, because every hour you spend scrolling through social media platforms can't be used for anything else. I think that's particularly critical for children and young people who are still developing. My parents used to give me certain TV times.

C

Chiara Elisabeth Carola Schorbach 7

:24

Mhm.

Yes.

Yes, yes, for me too, unbelievable, how long ago was that?

DS

Vice President of Artificial Intelligence

:47

Yes.

Yes, crazy, and I think you have to pay attention to that.

And that was just with his AI solution, which you just use in such platforms, also has no bias in it if possible. No minorities are disadvantaged or anything like that, yes, that's also a very subjective opinion of mine, but as I said, you have to make sure that AI solutions are not to the disadvantage of users and that you avoid any bias in them wherever possible.

C

Chiara Elisabeth Carola Schorbach 8

:33

Yes, of course.

Yes, so mum.

DS

Vice President of Artificial Intelligence

:37

Exactly.

Are we still going to talk about benchmarking? Like the use of AI at ProSiebensat 1 or other players in the online media industry.

C

Chiara Elisabeth Carola Schorbach 8

:53

You can also talk

about entire media companies in general, so this doesn't just have to do with the online media sector, but general media sectors and media companies.

C

Vice President of Artificial Intelligence

:58

Yes.

Yes, I mean, this is of course a very broad field, then in this question, no, because when we talk about prosieben, we're not just talking about the use of artificial intelligence in the context of our platform, but much further ahead, basically across the entire value chain of the media value chain, from the production of content to the marketing of content, and if you then look underneath, there are the so-called support processes, which are also part of it, and it is of course a big task to look for benchmarking.

C

Chiara Elisabeth Carola Schorbach 10:12

Whether yes.

DS

Vice President of Artificial Intelligence 10:15

But what you can basically say, and what we talk about in conversations or at conferences etc. and what we actually do, we already get the feedback that we are not the pioneers, or not Netflix, but we are not the late adopters either.

I think we're in the healthy midfield, which is also due to the fact that we don't make AI an end in itself, yes, but with every euro you invest you need, or was that here in a certain return on investment, yes, that's why it's difficult to break completely ahead and be a pioneer, but of course you also have to make sure that you don't fall behind. So everything that is happening now with GEN AI.

C

Chiara Elisabeth Carola Schorbach 10:37

Mhm.

Yes.

In the AI Playground
, for example.

DS

Vice President of Artificial Intelligence 10:55

Now we're moving away a bit, but you always have to look at what things you have to do. Because they keep you in this competitive situation, no, dealing with GEN AI is simply something you have to do as a media company or as a company in general, because if you don't do it, then you fall behind, yes, so if we take the Klarna example now, who have built a chat bot, for their customer service, where they now automate hundreds of conversations, yes, and of course have an efficiency gain as a result, if you don't do that as another service company, then you have a difficult cost structure, which means your product is more expensive and that automatically puts you out of the competition. On the other hand, you also have to look at the things you have to do.

C

Chiara Elisabeth Carola Schorbach 11:56

Mhm.

DS

Vice President of Artificial Intelligence 12:02

What are the things that make me stand out?
Yes, what are really innovation cases?
But again, the ones that have a certain sales potential, yes.

C

Chiara Elisabeth Carola Schorbach 12:13

Mhm.

DS

Vice President of Artificial Intelligence 12:14

And we've come via benchmarking, so as I said, I think we're in the good midfield as far as the adoption of AI and artificial intelligence is concerned.

C

Chiara Elisabeth Carola Schorbach 12:30

And when it comes to best practices, so somehow an example, then Playground, for example, among other things, is a good example of the fact that it is also available in the east for internal users to try out.

DS

Vice President of Artificial Intelligence 12:44

Exactly, yes, the Playground has many different facets.
In the first step, it simply has the function of allowing you to control and regulate the use of Gen AI to a certain extent, not completely, but to a certain extent.

C

Chiara Elisabeth Carola Schorbach 13:07

Mhm.

C

Vice President of Artificial Intelligence 13:08

Because with the advent of generative AI, the use of artificial intelligence has never been easy.

You used to need a data scientist or a whole team of data scientists from a team or a tool from a provider, but now all you need is an email address and you can use artificial intelligence in all sorts of different ways.

That's what happens, it's completely natural. People are curious and that also characterises us as ProSiebenSat1, we like to try out new things against the background of what happens, where does the data go? How is the data used?

You just have to make sure that you say ok, on the one hand I want to give my employees the opportunity to try out this new technology and see hey, how can you improve, simplify, automate your work processes etc., but on the other hand I also want to avoid any data going out, intellectual property whatever. So it's relatively easy for the A Playground itself to do this and say ok, you have a safe space where you can try things out.

C

Chiara Elisabeth Carola Schorbach 14:15

Mhm.

DS

Vice President of Artificial Intelligence 14:18

Your data doesn't go out? You have almost the same functionalities with the tools that are available outside.

But it doesn't stop there, you also have to empower your employees. That means providing training. How do you best utilise this technology? And you also need to provide some

guidelines on how to deal with the output that you get out of Gen AI, for example. The whole issue of labelling such content, what are you allowed to bring in?

C

Chiara Elisabeth Carola Schorbach 14:45

Yes.

DS

Vice President of Artificial Intelligence 14:53

Yes, so this best practice Gen AI is not just a tool consideration, but has other dimensions that you have to think about.

C

Chiara Elisabeth Carola Schorbach 14:56

The.

Mhm.

And how can you say so far that you think it's going well?

Do you think the work processes can be improved with AI?

C

Vice President of Artificial Intelligence 15:16

Yes, yes, I definitely believe

that. We're not there yet - the next step is that you simply have so-called agents who do a lot for you. That you then say as an employee, if I want to go on a business trip, then I'll book a flight, then I'll book a hotel, depending on what level you're at, you might also have an assistant who does that for you.

You can also go to events with such agents. You then tell them to book me a suitable hotel soon, please stick to our company guidelines, I would like to travel by train and sit in a quiet compartment. Then there will be agents who will book everything for you, send the documents, make your entries in the calendar, block the calendar for you, so that's where it will go, for example.

C

Chiara Elisabeth Carola Schorbach 15:55

Mhm.

Yes.

DS

Döring, Sebastian 16:07

No, or in invoice creation or in support processes, etc., I can imagine that this will become very, very widespread and, on the other hand, of course, in content production. In the USA, I think one producer has stopped the expansion of his studios for the time being, so he wanted to invest there 800000000.

C

Chiara Elisabeth Carola Schorbach 16:21

Mhm.

DS

Vice President of Artificial Intelligence 16:33

Because of Gen AI, because you've now I don't know if you've ever looked at Sora. That's the latest development from Open AI, so you can now make realistic short videos.

It really looks like you've shot it. Of course, this will also become more and more common, for example in content production, to reduce costs and, depending on the situation, to be more sustainable, because there's a difference between using an artificially generated background, for example, and flying to South America to shoot directly in the jungle, yes.

- C** **Chiara Elisabeth Carola Schorbach** 16:49
Wow, mum.
That's right, mum.
- DS** **Vice President of Artificial Intelligence** 17:19
The media industry as a whole, at least that's what various consultancies estimate, will make a very strong development of Gen AI and also benefit from it.
- C** **Chiara Elisabeth Carola Schorbach** 17:35
Okay, so then you see some negative effects, so when you say positive, there are also positive negative effects.
- DS** **Vice President of Artificial Intelligence** 17:39
Of course you have to look at that and that's also what I, what I just said with the Playground it's not just about making a technology available, but you also have to encourage people to be able to use this technology, yes with training courses with seminars with communities what we do everything.
- C** **Chiara Elisabeth Carola Schorbach** 17:56
Mhm.
- DS** **Vice President of Artificial Intelligence** 18:02
And that will be a big point. So as a company, do you manage to transform the people who are now, let's say, more directly affected by the use of this technology, which perhaps replaces them to some extent, do you manage to enable them to take on other jobs or create new job profiles where they work together with this technology?
Yes, most people say that this will be the case, yes, new jobs will be created etc. I can imagine
that too, but the question will be to what extent, yes?
- C** **Chiara Elisabeth Carola Schorbach** 18:25
Mhm, Mhm.
Yes, that's right.
- DS** **Vice President of Artificial Intelligence** 18:40
And it's not without reason that there were these strikes in the USA where the screenwriters fought against it. There's a certain fear that artificial intelligence is being used, and that's certainly something to watch. On the other hand, we also have the example of Meta, which has paid celebrities a lot of money to have chatbots that speak and react like certain celebrities, so you just have to keep an eye on that.
- C** **Chiara Elisabeth Carola Schorbach** 18:55
Mhm.
Yes.
- DS** **Vice President of Artificial Intelligence** 19:20
Whether it's actually the saviour and we'll only have to work 30 hours in the future with

more pay. Or whether certain jobs will actually simply be replaced and people will be affected who don't want to do these qualifications, can't do them, etc. Yes.

Chiara Elisabeth Carola Schorbach 19:35

C Mhm.

Yes, yes, understandably, yes, that's super interesting, because it's just so much on the go and so much can still happen, so I think it's such an interesting topic, um, if we go to the next question, for example, the impact on business results, you probably can't say that much or about your connection and satisfaction, can you?

Vice President of Artificial Intelligence 19:52

C

No, unfortunately I can't tell you that, but you have to differentiate between two things when it comes to artificial intelligence. What is the foundation work that I have to do, for example that I have to provide a good data basis, per.se now build a classic data warehouse, in which the data is well prepared, which is then consumed by beschieden Learning algorithms to develop a model. How do I allocate the share of the uplift to EBTA (earnings before interest, taxes and amortisation)?

There is foundation work that is difficult, but you have to take a close look at the individual used cases and say ok, what uplift does this have for me on my EBTA?

Chiara Elisabeth Carola Schorbach 21:01

C

Yes yes, okay very interesting, thank you for everything as I said, so I want you to, we have a few other questions, but I can totally understand if you say you can't say much about it now.

Vice President of Artificial Intelligence 21:12

C

Nope.

Vice President of Artificial Intelligence 22:52

DS

Okay, good luck then.

Chiara Elisabeth Carola Schorbach 22:55

C

Thank you thank you thank you and have a very nice afternoon and a nice evening soon ciao ciao.

5) Interview Teresa Gunsch - 08.04. - Meeting recording

Chiara Schorbach 9:44

Okay can you describe how mainly AI has been integrated into the online media platforms in your areas, including what you have done? And how was AI used the most?

Teresa Gunsch 10:16

I had the impression that we hadn't yet integrated KI very strongly into the platforms themselves, but rather into the work around it, which then led to the end product that we put on the online platforms. So I believe that there is still a lot to come, a lot will develop in this direction, but we have also used KI, for example, by converting an editorial video that we already had, where editorial work had already gone into it, what we got from a TV

clip, from a TV matzo, for example, into an article in order to simply have it in written form again and then finally be able to put it on the website. However, the entire process was not automated, so it was of course an intermediate step to check all the facts again so that we could revise the text and we wanted to do the same with the agency reports that we received from DPA, Reuters and so on and so forth. These daily agency reports that every editorial production actually publishes. They are picked up by every editorial team and often published as copy-paste, so they are simply taken as they come in from the DPA and published, and the reason we used KI was actually to change it again for SEO-specific purposes, simply to adapt it so that it is not completely the same text and so that the editors are relieved and can concentrate on other work than rewording. So paraphrasing simply takes the pressure off. That was a specific example where we used it, for example.

Chiara Schorbach

Yes, for example, if you now go towards these strategic goals, then the editors simply have less workload, don't they? So the integration of this AI technology has taken a few steps in an improved direction, you don't have to look at the whole matzo, it's just written down, so from the KI and then you convert it again, do another fact-checking so that it's a bit easier for the editors, right?

Teresa Gunsch

Exactly, and especially when it comes to agency reports, because in the end it's very time-consuming and often doesn't have much added value, and if you as an editor have the time to concentrate on a different topic, where perhaps more research work has to be done, where more background work is involved, then that relieves the pressure in the first place and is very good, because then you can do other pieces that are more intensive and which, in the best case, are better received by the readers.

Chiara Schorbach

So in the sense of, do you mean from pieces again somehow articles, for example, that need a little more time and that the editors then deal with them more?

Teresa Gunsch

Exactly. And being able to make larger categorisations for a topic, for example.

Chiara Schorbach

How do you mean larger categorisations?

Teresa Gunsch

In the sense of pieces, for example, when some political topic comes up that doesn't just relate to current affairs. Of course, you have to produce local news about how the main line in Munich is closed today because this and that has happened. Or some political event is happening and then you need more time to be able to provide context and categorise it better. And that often takes a lot more effort than simply sending out a news item. Of

course, that also requires more effort for research than being able to rely on someone and say, okay, yes, yes, and say okay, take this over and write me a background piece for it.

Chiara Schorbach 15:18

You don't just write texts with AI and then put them online, they are always rewritten.

Teresa Gunsch 15:32

In the best case scenario, the wording fits and only the fact checks have to be done, because then something like the chatgpt model or the playground that you could use usually fits. But then it can also happen that a name is simply misspelled or a location or something like that. Of course, that shouldn't happen.

Chiara Schorbach 15:59

Is there personalised, AI-driven content on online media platforms, be it social media or websites?

Teresa Gunsch 16:15

Not directly. We've now left it up to the platforms to deal with social media, so they use their own algorithm to ensure that things are distributed in a personalised way anyway. But we haven't dealt with personalisation. What I could think of now, however, would perhaps be the Joyn platform, because I can imagine that Joyn might then work in a personalised way, also to suggest to people what they are most likely to be interested in, what they are most likely to spend their time looking at certain things, I can imagine that.

17:00

Are there certain metrics or indicators where user behaviour has somehow changed with AI-driven articles?

17:12

Yes, I wasn't very deep into the SEO thing, where you really have to look closely at what exactly was going on, because you also have to be very responsive to the trends. In discussions with other editorial teams, it also emerged that AI content, i.e. articles written with AI, was not yet very well received by the target group in general, but you can't completely predict or really categorise why this is the case, because AI-written texts are perhaps still being curbed by certain platforms because human-generated content is still being promoted or something like that. But then you also have to experiment a bit to see what works and what doesn't work. I've heard of other publishers who have used things like accidentally inserting spelling mistakes to make it look human, but that didn't necessarily work for us. So we've rarely used it now, we've rarely produced such a smash hit where you say the article worked great, so it's quite the opposite.

Chiara Schorbach 18:49

How has AI changed the way users interact with the platforms? So has the duration or frequency of user sessions increased or decreased in any way?

Teresa Gunsch 19:01

I really can't judge that. I can only say that the articles compared to the others. Didn't perform as well. OK, so that was the first assessment of it.

Chiara Schorbach

So that is also a challenge for the AI. Also to achieve good personalisation to satisfy the user. So that it also helps the editors. It's also difficult to find a solution for everything.

Teresa Gunsch 19:41

What I know - but unfortunately not how well they performed. These are the videos that were published during the Corona period. What is also becoming more and more common in online journalism is data journalism, and this was done with an AI tool so that the corona numbers, for example, were updated daily by infected people and the AI then pulled this data and the numbers from it and packed them into a new video again and again. And then there were daily updates, why a little TV Matz always with new video material which were then stock photos or stock videos and that updated this data and that came out every day. I think that worked pretty well at the time. So Newstime was very new, but it worked very well.

Chiara Schorbach

Yes, when you say you worked with AI, what challenges did you encounter and if you encountered any, how did you overcome them?

Teresa Gunsch 21:22

I think there are various challenges. I think that on the one hand, the acceptance of working with such technologies has not yet fully arrived, perhaps also because people have a certain fear that too much of their actual work will be taken away from them. Many are perhaps also a little afraid of how their workplace will change. Or that their job will be lost, perhaps. So I do see that as a challenge. Very often it's simply interfaces that are the problem, but these tend to be automation issues, which perhaps don't have anything to do with AI in particular. But that was a challenge, internally, in terms of collaboration, what do we get from the TV journalists and so on.

I got the feeling from ProSieben that the AI Products team was also a bit overrun. All the editors simply approached them with "Please do everything" and there were only a few people responsible for it. We also gave them a whole list of "we'd like to have" in Newstime and so there's definitely a bit of manpower that's missing.

Chiara Schorbach 23:13

Do you know if prosieben Sat. 1 somehow uses chatbots or something like that for the website?

Teresa Gunsch 23:23

Not as far as I know. We would have loved to have this as content moderation, because it allows us to respond to comments from time to time. That also has something to do with the interaction with the target group. But then again, that's so individual that it's difficult. But that would be a dream of mine. Especially when fake news is written in the comments, or a question is asked and a machine, an AI, could simply give a fact-based answer. It would be brilliant, of course. We have used it more in such a way that, and I believe that AI in the game will certainly filter out hate speech, for example. These comments are then automatically deactivated or hidden for the time being and then we have to check them again, or work students have to check them again and see whether these comments are blocked or not. Chatbots are definitely not.

Chiara Schorbach 24:39

OK, now that we're talking about things for the future, have you heard anything about future projects? Anything that might be on the horizon, apart from the AI Playground, for example, which has just started to attract users.

Teresa Gunsch 25:02

Yes, the editorial director has already announced that prosieben wants to deal with this much more in the coming years, in the near future. I think that's a good thing, and I'm sure they should, so that you're not left behind in the end and the others overtake you. But I don't have any specific projects in mind right now.

Chiara Schorbach 25:42

Were there any guidelines or principles to ensure privacy and data protection? Or have AI-generated things not yet been released to the outside world?

Teresa Gunsch 26:07

So in terms of our products, the articles and the videos we've created and all that, I can't say, because it always goes through the platforms, which then have their own data protection guidelines. But that's why the Playground was created in the first place, so that the data remains internal, so that you don't have to use ChatGpt and the Group's data is given to the outside world. That was more about occupational health and safety, workplace protection. But not as far as the users themselves are concerned, I wouldn't know anything about that.

Chiara Schorbach

Can you explain again in your own words how the AI Playground works? Well, it's a platform for the internal right, so you don't use Chatgpt. So what do you use it for then?

Teresa Gunsch 27:05

It works just like Chatgpt a Language Model. In principle, it is exactly the same bundle. There should also be a Dali (Digital Addressable Lighting Interface) there, with which you can generate images and so on, but simply with the most important change that it happens

internally and that you don't have to access external ones. I'm just thinking, there was already this tool for various areas, I know that Galileo used it and then finally this tool, where the link to the editors' video could be inserted so that the text for the article could be created from it, that's actually a central platform for the various editorial offices.

Chiara Schorbach

How did you perceive the competition in terms of AI in other German media companies?

Teresa Gunsch 29:18

I don't

think they're the absolute pioneers. I would be surprised, because as I said, I didn't think they had that much manpower yet. Of course, prosieben is simply the second largest media company in Germany, so of course they are well positioned and will certainly do a lot more in this respect. We once had an exchange with Bayerischer Rundfunk, which simply can't be seen as a direct competitor to prosieben, because they are a public broadcaster and the possibilities are completely different, but we had an exchange with them, we visited them and they had a whole department that dealt with AI and that simply had the freedom that we lacked, that they had time to try things out and test things and also just let things be. And we were very focussed on the fact that we had to do things that had to work. Because we simply didn't have the manpower in Newstime itself, it just wasn't possible for us to do much testing ourselves. So I hope that there will be more room for manoeuvre in other areas.

Chiara Schorbach 30:56

You do believe that this will evolve, don't you? In the future

Teresa Gunsch

Yes, I think so. Mmm.

Chiara Schorbach 31:05

Do you think it has any effect on market share, brands, perception?

Teresa Gunsch 31:15

I don't know exactly. I find it difficult to assess because I think Prosieben is still very much focussed on TV. And you can already see that the number of people who actually actively watch TV is decreasing. The attention should be focussed on Joyn, on the on-demand platform, and I'm sure you've seen for yourself how much it's all about that. Yes, whether it can compete with other streaming platforms remains to be seen, I can't answer that, but I do believe that there is still a lot to come. The prediction that was made was that it would become a content production centre rather than remaining a TV company. I see that strongly and I think that's what's needed right now or what's being consumed more, the way it's happening right now, the turnaround. But I hope it succeeds.

Chiara Schorbach

I also think that you can do a lot more with AI in the future, and I believe that prosieben will have so much work to do now because of the turnaround. I believe that the focus is on Joyn. But I'm also someone who still watches a bit of TV now and again, my mum still watches TV too. And my mum's generation will live a little longer and develop a lot. I believe that even if the focus is now on content and so on, you can still do an incredible amount with AI.

Teresa Gunsch

There is a lot of potential there.

Chiara Schorbach 34:07

Yes, exactly, but that was actually already mine.

6) Product Manager AI - Meeting recording

12 April 2024, 10:59AM

26 min. 45 sec.



Chiara Elisabeth Carola Schorbach Transcription started



Chiara Elisabeth Carola Schorbach 3

:19

Okay, great is that okay if I record you okay, great, thank you very much and now I'll ask you again if that's okay if I record you, great okay?



Product Manager AI

:22

Yes, that's all right.



Chiara Elisabeth Carola Schorbach 3

:32

But then I would start, so I keep it very unstructured, so I might just ask something in between and if you can't answer something like I said, that's not a problem at all, then we just jump to the next question, especially so I know that these key figures and such are generally very difficult.

I mean, there's not one person who's responsible for everything, so it's all good, no problem at all, you're responsible, so you're a product team, right, exactly what does it all involve?



Product Manager AI

:55

Exactly, so we are a team, I think we are about 25 -, 30 people now and our goal is to ultimately use AI to provide software or tools that help people with their processes.

We've also done smaller use cases where we've somehow accessed people's tools and incorporated AI into them.

Sometimes we also use external tools or solutions and set them up so that the specialist departments can use them, but ultimately, as the name of the AI Products department suggests, it's all about building software and creating products that can then be used by different users.

C

Chiara Elisabeth Carola Schorbach 4

:54

Okay?

So how has AI been integrated into the media platforms so far, whether online or otherwise, and how is it most strongly integrated, in which area?

HJ

Product Manager AI

:04

Yes, well, I know a few of our use cases, which I remember quite well, then we started last year with a case where we wrote automated SEO texts.

For the websites, as what we did there, we have certain clips, these can somehow be between one minute and 6 minutes long, we then had a transcript created with the help of AI and from this in turn we generated SEO text and this is then used to add the text to our websites, i.e. a prosieben or Sat eins.de or I think also on Joyn in some cases, where these clips then appear, in order to increase as many visitors as possible and the SEO reach of these clips.

That was one of the use cases we did.

Otherwise, there are many things that we also do in the content area

What we are currently doing, for example, is generating teaser texts with the help of AI.

This means that we have certain content, be it somehow.

Series episode of the series in feature film or something like that and then there are various materials that we either receive from the licensor or are perhaps already an in-house production, which we then have teaser texts generated with the help of this data and metadata on the content pieces, so always the same pattern, a fairly short text, usually just saying one sentence and this is then used to announce the content in programme guides, for example, or on the website. This all goes into our content catalogue and can then be used for various platforms.

These are the text application cases, and you have to say that you don't always realise what the individual areas are already using AI for, so I think it is used in the editorial offices to get inspiration, perhaps to write a moderation for an article.

In day-to-day work, time is used to summarise e-mails and things like that, and what we are now doing in our team in particular is GenAI Playground. This is simply a tool that allows you to use different GenAI models.

For example, we have connected GPT 3.5 or 4 via Asha and we make it available to employees so that they can use it, I'm not quite sure because it's not ultimately a platform that is used by a customer or an end user, but within the organisation.

C

Chiara Elisabeth Carola Schorbach 8

:11

What strategic goals are you pursuing by implementing AI at all?

HJ

Product Manager AI

:12

So originally, the aim was simply to use AI and to encourage people who are shy to simply give it a try.

In the end, I think it's always about that. To increase efficiency a little or to say hey, we can save time and costs and then perhaps utilise the working time that someone would otherwise have invested in some other way.

Of course, you can also increase productivity

in this way and maybe we often have content where we can't manage to write texts or generate images because it's just too much and then we just leave it for certain things and that's where the idea of simply using AI to be even more productive, to simply create more than before, to increase productivity and I think in general it's just about being innovative, trying things out, even if we can't yet measure the exact value behind it.

Yes, but simply trying things out and working as innovatively as possible.

C

Chiara Elisabeth Carola Schorbach 9

:36

What is your personal, so useless, also a lot in your, now in your free time, for example, you work a lot, then also with Chatgpt it enables you to organise your workflow better and perhaps be a little more productive.

HJ

Product Manager AI

:52

Yes, totally. I often use Chatgpt in my free time or our Playground at work.

What I also often do is get inspiration from it. I often promptly say hey, you're working in this and that role and you have this problem, this is your product, you want to implement a new feature or something and then I get ideas from the model, which works really well and I mean, you can't even use it one-to-one, but it gives you a really good reference that you can then use.

Another thing we're currently trying out is Co-Pilot, which somehow helps you to either just write functions in Excel or summarise emails in Outlook, which simply saves time.

C

Chiara Elisabeth Carola Schorbach 10:49

Mhm, okay.

Yes, I can understand that and I use it myself, I have to say, not just for the simplest things like writing an email or something like that. I also have a lot of friends who use it and it's really incredible how quickly you use it and then maybe think to yourself, how did I write emails before?

HJ

Product Manager AI 11:02

Yes. Or just don't allow anything to be reformulated?

I have to make

a powerpoint presentation. But maybe it doesn't sound so well formulated yet, then I use Chatgpt and suddenly everything sounds super professional and you take it over.

C

Chiara Elisabeth Carola Schorbach 11:32

OK, so I probably know that you can't say too much about user behaviour

now, but just let me know how AI technology has influenced user behaviour and then engagement on the platforms. Are there specific metrics or indicators?

HJ

Product Manager AI 11:56

However, I already know a bit from these SEO texts that we have written that some of them have not performed so well in the Google ranking.

So there are also negative effects and I believe that Google as a tool also recognises whether it was written manually or with AI.

In other words, if you compare the results, I think the manually written text still performed better than the AI texts.

But of course you also have to consider that you can produce more texts with AI, so the mass is simply much higher and I think that's where the great value lies.

That's one of the things I've learnt.

Apart from that, I can only say that the use of these internal tools that we offer is super high, so we notice that new users are joining every day, that the number of prompts continues to rise and that users are also coming back.

And they use the platform, so you can already see a very positive impact.

C

Chiara Elisabeth Carola Schorbach 13:15

You don't personalise the content, do you?

Well, I've already asked other people the same question and it was that you don't personalise it on the websites, do you?

HJ

Product Manager AI 13:31

No, I think that's still a vision that we're thinking about at some point, for example personalising our content and saying I don't know, you're on the streaming platform and we know you like action films, so maybe you'll get a scene played out as an action scene.

However, I don't think it's going in the direction of personalisation at the moment.

C

Chiara Elisabeth Carola Schorbach 13:55

How has the way AI, i.e. how you interact with AI, changed on the platforms? So has the duration or frequency of user sessions increased?

HJ

Product Manager AI 14:14

Unfortunately I don't know exactly.

C

Chiara Elisabeth Carola Schorbach 14:15

Okay, when we come to challenges, how did you overcome them?

HJ

Product Manager AI 14:27

Mhm.

Yes, so what is always a challenge

in our field is how do you actually deal with copyright?

Especially when you publish things like this, it's actually the case that when you generate texts, images and videos via AI, you don't have any copyright per se and, in theory, we are of course interested in having the exclusive rights for things like this.

So that's always a challenge.

In some cases, we are already negotiating with various providers, I know that, to see if we can somehow get the rights or conclude contracts that we can also pay for, but then also get the rights, so to speak.

In general, this whole topic of how can I utilise AI?

You notice that in conversations, too, that there is sometimes uncertainty among people because they don't know exactly what they are allowed to use, what they are not allowed to use, how should the whole thing be labelled?

Sometimes, too, this fear that I might be replaced by AI at some point, so that's another topic that I think you have to address again and again, that you say OK, the world of work is changing, but that's not the primary goal now, to somehow cut jobs as a result.

Yes, and then I also think this topic, that there are

just so many tools and so many possibilities to somehow bundle the whole thing and to control it a bit or to somehow bring initiatives into the company, that's super difficult, it's not our goal to centralise everything, but you notice again and again that there are also very different experiences at different levels. Some people have been with us for a long time, they've tried all sorts of things and others are very cautious and yes, still at the very beginning.

C

Chiara Elisabeth Carola Schorbach 16:19

Yes.

You know, it's also perhaps a bit generation-dependent, so for example someone who is 25 - 30 says yes, I'd actually like to try it out and see what happens, or perhaps someone who is a bit older, who has been with the company for 10 years, is perhaps a bit more sceptical about the whole thing.

HJ

Product Manager AI 16:54

I think you could recognise a tendency, but I also know people who are older and have been around longer and who try out a lot of new things.

In general, I have the feeling that you're very willing to try things out and experiment, let's just say I know it from my own team. We are very technical and have a lot of developers who like to play around and there is a great thirst for knowledge and everyone in our team has already tried out tools and uses them in everyday life.

I think it always depends a bit on the areas and the personal characteristics of the people.

C

Chiara Elisabeth Carola Schorbach 17:42

Yes, yes, understandably, because the use of AI on platforms and user trust and data protection will have

an impact. So there are any negative perceptions that people are trying to defuse, right?

HJ

Product Manager AI 17:51

Yes.

What we do, of course, and this is also an internal requirement, is that we declare or label the content that has been created with AI.

I know, for example, that people in the news sector are naturally also very careful because they only want to publish content that is correct in the end and doesn't somehow come from a model and the model is perhaps hallucinating or giving false information.

In other words, we naturally have to rely to some extent on the trust of the users or strengthen that trust by saying that the content you see here is either AI-generated and then checked by us again or has somehow been created manually, so we're careful about that.

C

Chiara Elisabeth Carola Schorbach 18:48

Mhm.

HJ

Product Manager AI 18:57

And?

even said the topic of data protection yes.

C

Chiara Elisabeth Carola Schorbach 19:02

Yes, yes, it's good that we can say more in the licence plate.

I don't think it's so mature yet that you can't actually say more than they have.

How do you label it?

There's still a big question mark behind it and you just have to wait and see what Legal says about it, of course, and yes.

HJ

Product Manager AI 19:20

Yes, I mean, we also have instructions that when we use tools, please don't enter any personal data at all, so even if we use our own tools, where the data certainly doesn't go outside, there are still instructions not to enter any personal data, not even confidential data, because of course there's always a bit of a fear that confidential data will go outside that shouldn't go outside.

C

Chiara Elisabeth Carola Schorbach 20:05

If we look a bit into the future now. Are there any newer AI, projects or initiatives that you can tell me about, perhaps a little bit in the direction of engagement and for the user and not just internally?

HJ

Product Manager AI 20:24

Well, I think that we have visions.

Also from my area in the content area, that we are currently trying out a lot, not just creating text, but somehow also using moving images, using images to create videos. I also believe that

the topic of personalisation has great potential, so that as a user on the website or with Joyn or wherever you really get your personalised content.

And I think it's

also important to look at how you can use AI with advertising partners.

So producing smaller advertising clips and perhaps also using personalisation - I think

there's a lot going on in this video area, there have already been initiatives and campaigns that have been implemented, but really making this available to the masses is still a challenge.

Chiara Elisabeth Carola Schorbach 21:35

C

Yes, I've also experimented a bit with music now, so that an AI really spits out the song when you listen to a podcast and it always starts at 06:30 and always goes online.

Chiara Elisabeth Carola Schorbach 22:15

C

If we now talk about the ethical considerations of the use of AI, there are guidelines, principles that you have to follow on the platforms right now.

Product Manager AI 22:31

HJ

So there's a bit of a guiding principle, I've already said, to label things, but perhaps also to check again, so whenever there's something that's hurtful, when personal rights are violated, so on the one hand we try to use models that somehow already filter that out or have taken some kind of measures, that's not even there, but then we also always check the content again, so I think that's a principle that we have. Apart from that, I think we always endeavour to appear as diverse as possible, not to exclude anyone and of course this should also be reflected in our text and visual language.

Chiara Elisabeth Carola Schorbach 23:24

C

Yes, if you look at other media companies now, do you have any insight into how far they are and how far you are in terms of AI use?
So do you know how top-ranked media companies are when it comes to using AI to try it out or do you not know anything about it?

Product Manager AI 23:50

HJ

So my impression is always that we're already trying out quite a lot, so we've already done a lot of podcast episodes with AI-generated videos.

It's hard to say what the others are doing right now.

I think you can automate

the whole thing a bit more and push it even further. And really utilise it, not just experiment, but actually derive products from it in the end.

My feeling is that it will do quite a lot, but that's just my personal opinion.

Chiara Elisabeth Carola Schorbach 24:39

C

And has the integration of AI in the platforms had an impact on general business results such as sales, market share or market perception, or not really yet.

Product Manager AI 25:17

HJ

I don't know exactly, but if I did, I think I would say it's still very low.

Chiara Elisabeth Carola Schorbach 25:30

C

Yes, everything is perfect, that's all there is to it.

Appendix 3: Questions of the Interviews

A) Understanding AI Integration

1. AI Implementation Overview: Can you describe the main ways AI has been integrated into your online media platforms? Which areas (content recommendation, user interface, analytics, etc.) have seen the most significant AI adoption?

2. Strategic Goals: What strategic objectives guided the integration of AI technologies into your platforms? How do these objectives align with user engagement and satisfaction?

B) Impact on User Engagement

1. User Behavior Insights: How has AI technology influenced user behavior and engagement on your platforms? Are there any specific metrics or indicators that have shown notable changes?

2. Content Personalization Effects: In what ways has AI-driven content personalization impacted user engagement rates? How do you measure the success of these personalization strategies?

3. User Interaction: How has AI changed the way users interact with your platforms? Has there been an increase in the duration or frequency of user sessions?

C) Impact on User Satisfaction

1. Feedback and Satisfaction Metrics: How do you measure user satisfaction in relation to AI features? What feedback mechanisms are in place to gather user perceptions of AI-driven content or features?

2. Challenges and Solutions: What challenges have you encountered in enhancing user satisfaction through AI, and how have you addressed them?

3. AI and User Trust: How does the use of AI on your platforms affect user trust and privacy concerns? What steps have been taken to mitigate any negative perceptions?

D) Future Directions and Ethical Considerations

1. Future AI Initiatives: Are there upcoming AI projects or initiatives aimed at further improving user engagement and satisfaction? Can you share any details or goals of these projects?

2. Ethical AI Use: How does ProSiebenSat.1 ensure ethical considerations are taken into account when deploying AI? Are there any guidelines or principles that govern AI use within your platforms?

F) Additional Insights

1. Industry Benchmarking: How does ProSiebenSat.1's use of AI compare with other players in the online media industry? Are there any lessons learned or best practices you can share?

3. Impact on Business Outcomes: Beyond user engagement and satisfaction, how has the integration of AI into your platforms impacted broader business outcomes like revenue, market share, or brand perception?

Appendix 4: Survey questions

This survey is how it was shown to the participant:

Artificial Intelligence: User engagement & Satisfaction

Welcome and thank you for participating in my survey. I am Chiara and currently a Master student at Universidade Católica Portuguesa. The focus of my master thesis, is to understand the impact of Artificial Intelligence (AI) on user engagement and satisfaction within online platforms (websites and social media), specifically looking at experiences with large media companies, including but not limited to ProSiebenSat.1.

Confidentiality Assurance:

Please be assured that your responses will be kept confidential and anonymous. The information you provide will be used solely for academic research purposes.

Survey Instructions:

The survey consists of multiple-choice questions and should take approximately 5-10 minutes to complete. For each question, please select the option that best reflects your experience or opinion. At the end of the survey, there will be an opportunity for you to share any additional thoughts or experiences you feel are relevant.

By participating in this survey, you are making a valuable contribution to my understanding of AI's role in enhancing user engagement and satisfaction in the digital media landscape. I really appreciate your time and thoughtful responses.

* Gibt eine erforderliche Frage an

1. Do you want to continue with this survey? *

Markieren Sie nur ein Oval.

Yes

No *Wechseln Sie zu Abschnitt 6 (End! Thank you for your participation!)*

General Questions

2. What age group are you in? *

Markieren Sie nur ein Oval.

- 15-24
 25-34
 35+

3. How many hours a day do you spend using the internet? (social media, websites, research) *

Markieren Sie nur ein Oval.

- up to an hour
 from one to four hours
 Over 4 hours

4. Do you use social media platforms? (e.g. LinkedIn, Instagram, Facebook, X, TikTok, etc.) *

Markieren Sie nur ein Oval.

- Yes
 No

5. Are you aware of the Topic Artificial intelligence in general? *

Markieren Sie nur ein Oval.

- Yes
 No
 Unsure

10. Overall, how satisfied are you with the integration of AI in enhancing your user experience on these platforms?

Markieren Sie nur ein Oval.

- Very satisfied
 Somewhat satisfied
 Not satisfied
 I don't know

11. How much do you trust the AI-driven content recommendations on these platforms?

Markieren Sie nur ein Oval.

- Completely trust
 Trust to some extent
 Do not trust

12. How concerned are you about privacy and data protection in relation to AI personalisation on these platforms? *

Markieren Sie nur ein Oval.

- Very concerned
 Somewhat concerned
 Not concerned

Artificial Intelligence - Awareness and Perception of AI

Definition: "Artificial intelligence, or AI, is technology that enables computers and machines to simulate human intelligence and problem-solving capabilities." (What is Artificial Intelligence (AI), IBM, n.d.)

6. Have you been using AI tools to support you in work, travels, studying, writing and creating? *

Markieren Sie nur ein Oval.

- Always
 A lot
 Sometimes
 Never

7. Are you aware of AI features, such as personalised content recommendation, on online media platforms? *

Markieren Sie nur ein Oval.

- Yes, fully aware
 Somewhat aware
 Not aware

8. How well do you think AI works to personalise content on these platforms? *

Markieren Sie nur ein Oval.

- Usually very relevant to my interest
 Somewhat relevant but could be improved
 Often not relevant to my interests
 I don't know

9. Has AI personalisation made it easier for you to discover content that interests you?

Markieren Sie nur ein Oval.

- Significantly easier
 Somewhat easier
 No change
 I don't know

ProSiebenSat.1

13. Do you know the German media company ProSiebenSat.1? *

Markieren Sie nur ein Oval.

- Yes
- No *Fahren Sie mit Frage 17 fort*

14. How often do you use ProSiebenSat.1 online media platforms? Including social media and/or Websites *

Markieren Sie nur ein Oval.

- Daily
- Weekly
- Monthly
- Rarely
- Never *Fahren Sie mit Frage 17 fort*

15. Are you aware that ProSiebenSat.1 uses AI to enhance your experience on their platforms? *

Markieren Sie nur ein Oval.

- Yes, I am aware
- I have some idea
- No, I am not aware

16. How much do you trust the AI-generated content recommendations on ProSiebenSat.1 platforms? *

Markieren Sie nur ein Oval.

- I trust them completely
- I trust them to some extent
- I do not trust them
- Can't tell

Future of AI (Nearly there don't worry)

17. Would you like to see more AI-driven features on online media platforms in the future? *

Markieren Sie nur ein Oval.

- Yes, definitely
- Maybe, depends on the features
- No, I am content with the current features
- I don't know

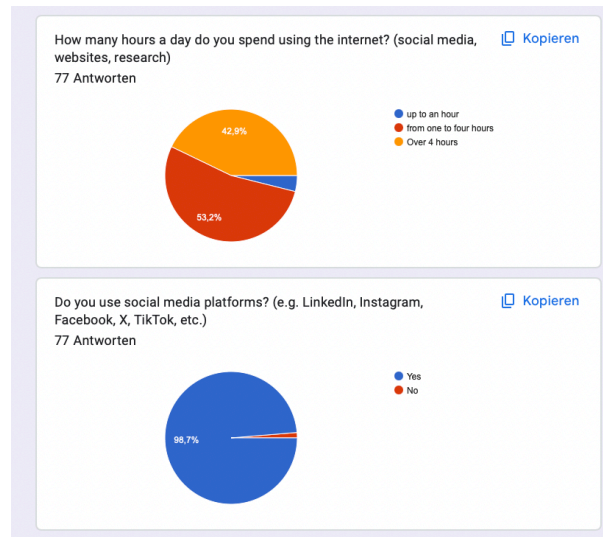
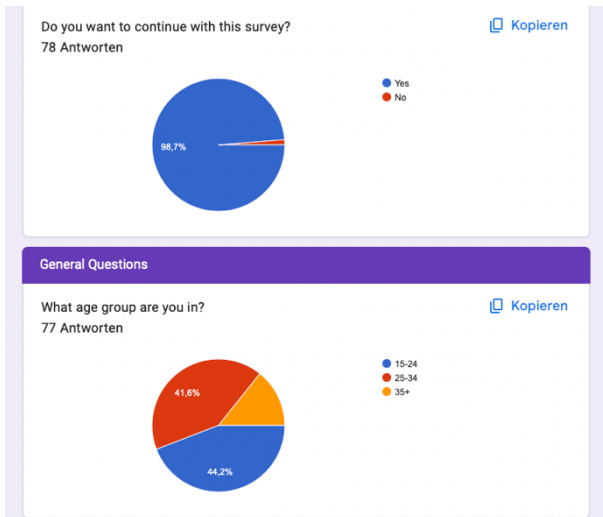
18. What improvements would you suggest for AI-driven features on online media platforms?

19. Nearly there: Do you have any other comments or feedback regarding AI on online media platforms?

End! Thank you for your participation!

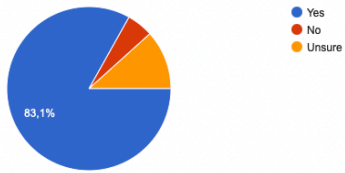
Unfortunately, you do not meet the criteria to complete this survey. But thank you for your time! :)

Appendix 5: Survey Table with the Results



Are you aware of the Topic Artificial intelligence in general?
77 Antworten

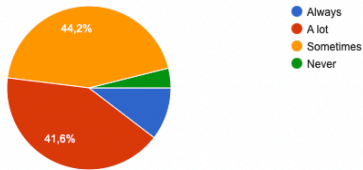
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Artificial Intelligence - Awareness and Perception of AI

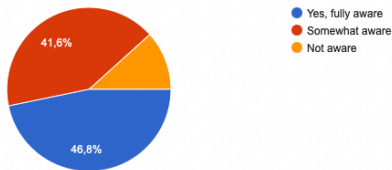
Have you been using AI tools to support you in work, travels, studying, writing and creating?
77 Antworten

[Kopieren](#)



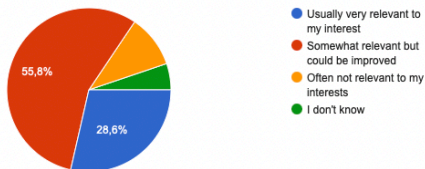
Are you aware of AI features, such as personalised content recommendation, on online media platforms?
77 Antworten

[Kopieren](#)



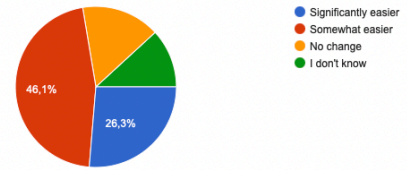
How well do you think AI works to personalise content on these platforms?
77 Antworten

[Kopieren](#)



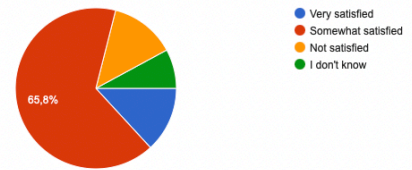
Has AI personalisation made it easier for you to discover content that interests you?
76 Antworten

[Kopieren](#)



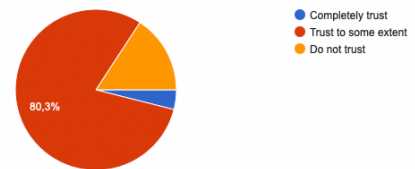
Overall, how satisfied are you with the integration of AI in enhancing your user experience on these platforms?
76 Antworten

[Kopieren](#)



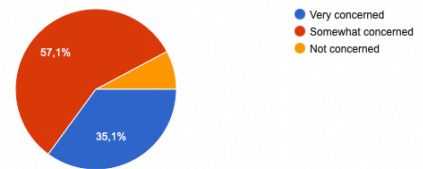
How much do you trust the AI-driven content recommendations on these platforms?
76 Antworten

[Kopieren](#)



How concerned are you about privacy and data protection in relation to AI personalisation on these platforms?
77 Antworten

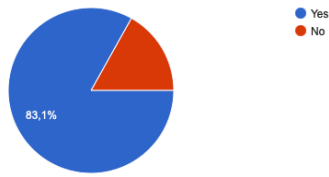
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ProSiebenSat.1

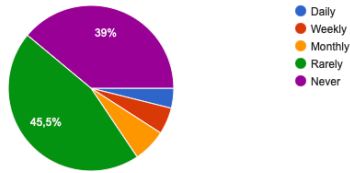
Do you know the German media company ProSiebenSat.1?
77 Antworten

[Kopieren](#)



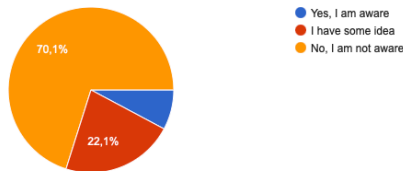
How often do you use ProSiebenSat.1 online media platforms?
Including social media and/or Websites
77 Antworten

[Kopieren](#)



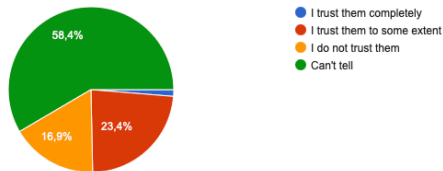
Are you aware that ProSiebenSat.1 uses AI to enhance your experience
on their platforms?
77 Antworten

[Kopieren](#)



How much do you trust the AI-generated content recommendations on
ProSiebenSat.1 platforms?
77 Antworten

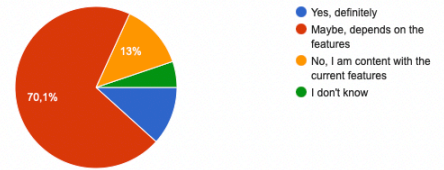
[Kopieren](#)



Future of AI (Nearly there don't worry)

Would you like to see more AI-driven features on online media
platforms in the future?
77 Antworten

[Kopieren](#)



What improvements would you suggest for AI-driven features on online media
platforms?
27 Antworten

Not repeat the same advertisements over and over again, have more transparency
on how AI made its suggestions

More security for my data

easy access

More transparency and options for personalisation

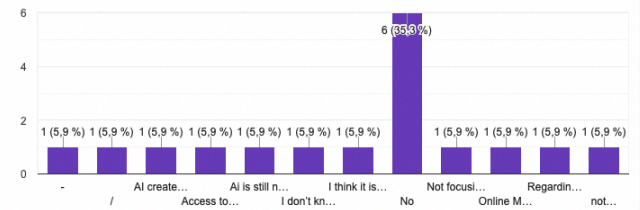
Not focusing on content creation and rather on enhancing the user experience.
Features Like Text to Speech or content suggestions could improve to User
experience without the risk of dis- or misinformation. Current LLM models don't
(yet) deliver trustworthy results to produce content, which benefits the user.

Obvious personalized content might scare the people

More clarity on the extend of AI usage/ how much is still going through „human
hands“ (if that makes sense)

Nearly there: Do you have any other comments or feedback regarding
AI on online media platforms?
17 Antworten

[Kopieren](#)



End! Thank you for your participation!

Unfortunately, you do not meet the criteria to complete this survey. But thank you for your
time! :)