The Class Ceiling in Recruitment

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Abstract

Recruitment processes today face challenges such as bias, fairness, and the pursuit of a diverse workforce. The war for talent also underscores the importance of examining recruitment processes. This study explores the potential of artificial intelligence (AI) to mitigate biases in hiring while encouraging diversity.

This thesis aimed to discover the potential of AI in human resource (HR) management. We interviewed experts in the field and reviewed the existing literature to determine optimal HR use cases of AI. This depended on contextual factors such as industry type and urban versus rural hiring dynamics. While skepticism about AI's effectiveness persists, experts agreed on its utility for initial screening, especially in larger organizations. Skill assessment is emerging as a focal point, with tools like HiPeople gaining traction for predicting hard skills. However, experts agreed soft skills assessment remains an area where human interaction excels. Diverse teams are recognized for their positive impact, in line with academic views. In summary, while AI is useful in areas of recruiting, implementation requires consideration of contextual factors.

Title: The Class Ceiling in Recruitment - A study examining the social biases in recruitment processes nowadays and possible solutions based on artificial intelligence

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Keywords: Artificial Intelligence, Machine Learning, Disruptive Innovation, Recruiting, Talent Acquisition, Biases, Classism, Nepotism, Similarity Bias, Resource Based View (RBV)

Abstract Portuguese

Atualmente, os processos de recrutamento enfrentam desafios relacionados com preconceitos, justiça e a procura de uma força de trabalho diversificada. A guerra pelo talento também sublinha a importância de examinar os processos de recrutamento actuais. Este estudo explora o potencial do software orientado pela inteligência artificial (IA) para atenuar os preconceitos na contratação, promovendo simultaneamente a diversidade.

Entrevistámos especialistas na matéria e analisámos a literatura existente para determinar os melhores casos de utilização da IA nos RH. Embora persista o ceticismo quanto à eficácia da IA, os especialistas concordaram com a sua utilidade nos processos de seleção inicial, especialmente em organizações de maior dimensão que procuram racionalizar as operações. A avaliação de competências está a emergir como um ponto fulcral, com ferramentas como a HiPeople a ganharem força para prever competências difíceis. No entanto, os especialistas concordaram que a avaliação das competências transversais continua a ser uma área em que a interação humana se destaca. As equipas diversificadas são reconhecidas pelo seu impacto positivo no desempenho empresarial, em consonância com os pontos de vista académicos. Em suma, embora a IA possa ser útil em determinadas áreas do recrutamento, a sua implementação requer uma análise cuidadosa dos factores contextuais.

Título: Class Ceiling no recrutamento - Um estudo que analisa os enviesamentos sociais nos processos de recrutamento na atualidade e possíveis soluções baseadas na inteligência artificial

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Palavras-chave: Inteligência artificial, aprendizagem automática, inovação disruptiva, recrutamento, aquisição de talentos, preconceitos, classismo, nepotismo, preconceito de similaridade, visão baseada em recursos (RBV)

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List of Abbreviations

AI: Artificial Intelligence

AOK: Allgemeine Ortskrankenkasse (German Insurance company)

BCG: Boston Consulting Group

CEO: Chief Executive Officer

CMO: Chief Marketing Officer

CV: Curriculum Vitae

HR: Human Resource

HRM: Human Resource Management

IA: Inteligência Artificial

ML: Machine Learning

RBV: Resource Based View

Introduction

Diversity and inclusion have become central concerns in today's labor markets.
Sheryl Sandberg former COO of Meta stated that, “We need to resist the tyranny of low expectations. We need to open our eyes to the inequality that remains. We won’t unlock the full potential of the workplace until we see how far from equality we really are” (Sandberg & Thomas, 2017).
Sandberg’s message advocates breaking out of the confines of familiar circles to harness the potential of diverse backgrounds.

With this in mind, imagine the situation of a former founder and CEO of an advertising company. He has a huge network beyond his industry and beyond Europe. He also has a gift for supporting and finding young talent. Recently he shared a LinkedIn post about a young man and asked his network if anyone would like him to work for them. He wrote: “Today I have a unique offer. I guarantee that wherever he gets an opportunity, he will be one of the best, most engaged, and most humanly impeccable employees. And anyone who doesn't go out of their way for him now will be annoyed in 4 years at the latest. Really.” This man's intention seemed praiseworthy. He sought to help this young man and his network by putting him forward and providing a way around “the war for talent”. But in the long run, counterintuitively, this could promote inequalities in the labor market.

People looking for a job, especially first-timers, want to feel liked and accepted. And companies like to employ people they can easily trust and feel familiar with. A current study by BCG (2023) showed that these desires are the same for most people, but the starting conditions differ. Working-class children have a harder time in finding their career paths. The consulting group concluded that companies should seek to prefer "first-generation professionals" as they tend to be more loyal and are more intrinsically motivated. When it comes to accurately identifying and choosing talent, research shows that there is only a 50% chance of making the right choices (Booker, 2021). Making fast decisions and being influenced by cognitive biases is a recurring phenomenon in recruitment. Scanning CVs and making decisions most of the time is an act of 6 seconds (Boston University, 2012). Factors that speed up this process and lead to biased decision-making are mostly a candidate's unique demographic background, such as race, gender, sexual orientation, or age (Cioca and Gifford, 2022). In the United States, 61% of employees have experienced or observed based on those demographics Glassdoor (2020).

Inequalities in the labor market are supported by a workforce that encourages and employs familiar people and often nepotistic hires. Nepotism refers to favoritism towards family and friends of employees. Nepotism is not the only bias that influences hiring processes. Addressing biases in the hiring process is crucial for organizations to foster diversity and inclusion. Failure to address biases can result in missed opportunities to hire qualified candidates and it creates an unwelcoming environment for diverse talent (Chamberlain, 2016). The recruitment process for entry-level positions, such as internships, plays a key role in shaping the future workforce. Knowledge from internship experiences helps during the recruitment processes for the first jobs or in the first weeks of the new job. A study by Anjum (2020), for example, found that internships are fundamental for the future success of students in terms of personal development, learned skills, and capabilities. According to Jaser et al. (2022), using AI in human resource processes is a new and probably unstoppable trend that may be able to limit biases that stop applicants from gaining work experience. Therefore, the Research Question examined in this thesis is:

RQ: "Can AI mitigate hiring biases, encouraging a more diverse workforce?"

Literature Review

2.1. Significance of the research question

Job seekers who belong to a lower social class may experience disadvantages when searching and applying for employment. A study by DeOrtentiis et al. (2022) demonstrated that applicants coming from more privileged social classes received more positive feedback and recalls than applicants who had signals of lower social class. These findings of DeOrtentiis et al. (2022) suggest a strong need for more research related to the factors that create this social imbalance in recruiting and the need for possible solutions. One possibility is the integration of AI into human resource management (HRM) practices. AI that can generate texts or other creative output is called generative AI. ChatGPT, for example, stands for Chat generative pre-trained transformer. Tools like ChatGPT use generative AI and machine learning to produce various types of outputs while making use of rigorously fine-tuned data combinations to train algorithms (McKinsey & Company, 2023). A survey by McKinsey (2022) also highlighted that the usage of AI in the broader society has more than doubled in the past five years, along with investments made in AI. Redstone, for example, also uses their own AI to assess market and financing and to draw investment hypotheses. Therefore, trust in AI's utility is already present in some industries (Sofia, 2023).

An article published by BCG in 2023 articulated the importance of understanding the significant impact of generative AI in the industry of HR. Scholars like Vrontis et al. (2021) even found that AI is a main contributor to the enhancing the quality of HR decisions. The use of AI in recruitment processes has also gained attention due to its potential to mitigate biases and promote fairness (Sajjadiani et al., 2019).

By exploring the effects and perception of AI-driven software in recruitment, this research can contribute to the existing literature on AI in HRM and shed light on its implications for workplace diversity and performance. Socially, this research question is significant as it addresses the need for fair and inclusive recruitment practices. Nepotism and social class biases can hinder diversity and limit opportunities for individuals from disadvantaged backgrounds. By examining how AI-driven software can enhance workplace fairness and diversity, this research can inform organizations and policymakers about the potential benefits of adopting

such technologies. It can also contribute to creating more equitable and inclusive work environments, which are essential for promoting equal opportunity (Ore & Sposato, 2021).

2.2. Four types of capital

To understand this imbalance within the labor market, and in particular the biases that foster this imbalance, social structures should be examined. The reproduction of dominant cultures within the labor market may be closely linked to hiring style and inherent biases like nepotism. This assumption is highlighted by researchers Cook et al. (2012), who found that dominant cultures produce social inequality.

Bourdieu's (1985) work on the concept of capital can be used to explain the extent and origin of dominant cultures. According to Cook et al. (2012) capital exists in different forms, namely: economic, social, symbolic, and cultural. Cook et al. (2012) point out that Bourdieu (1985) defined capital not only as the commonly known economic capital, which is made of the persons' income, wealth, inheritance, and other wealth assets such as real estate. Bourdieu (1985) also pointed to social capital, which is made of the person's social networks and connections that were developed in school or through friendships, which in turn lead to memberships in certain wealthy societies that foster networking effects (Cook et al., 2012). Bourdieu (1985) also elaborated another form of capital specifically symbolic capital. Symbolic capital relates to how others perceive an individual and therefore attribute more or less value to that individual. Finally, Bourdieu (1985) mentioned cultural capital, which is concerned with social skills, extracurricular activities, and self-presentation choices. Together these different forms of capital contribute to an individual’s value and behavior according to McPhail et al. (2010).

2.3 Cognitive biases and their impact on hiring processes

Cognitive biases are rooted in the use of shortcuts when making decisions (Bazerman & Moore, 2013). Traditional recruitment methods can have limited reach and accessibility. They often rely on physical job fairs, campus visits, or word of mouth, which may exclude individuals who are not part of certain networks or communities. This can contribute to disparities in access to employment opportunities (Boden-Albala et al., 2015). For the purpose of this thesis Nepotism and Classism will be examined further.

2.3.1 Nepotism

Nepotism is criticized because it promotes hiring strategies that favor connections over talent, which hinders a meritocratic organization (Krupnick, 2023). Some nepotistic hires are not all bad, as they result in people staying with the company longer (Harvard Magazine, 2023). Staiger (2021) argues that these people stay in companies because they are not expecting to get a promotion at any other company. Staiger (2021) mentioned that this explains the fact that black men still make less money than white men even though their parents had the same income and qualifications. Staiger (2021) explains that this gap by nepotistic hiring and parental job connections during the initial job search. This can be drawn back to the types of capital by Bourdieu (1985), in which the scholar explains why in some cases the right network and experiences are worth more than the actual academic qualifications. Researchers such as Bargh, Chen, and Burrows (1996) have found that when individuals work under conditions of high cognitive load, that is, when they are in stressful situations, they tend to use heuristics and shortcuts to process information and make judgments about newly encountered individuals. The scholar Kahneman (2011) also referred to fast thinking in his book Thinking, Fast and Slow where he states that when it comes to unbiased recruitment, the person recruiting must take time and be aware of cognitive biases before making decisions. He describes two systems of thinking that determine our decisions. System 1 is fast, intuitive, and emotional. While system 2 is slow, deliberate, and logical. Kahneman (2011) advises recruiters to use system 2 and highlights the effectiveness of using structured interviews to assess candidates and make objective decisions.

According to Li et al. (2015), this could explain how a leader may judge new candidates too quickly instead of giving them time to settle in. Additionally, the lack of diversity within search committees may contribute to biased hiring decisions. Homogeneous groups tend to favor candidates who share their characteristics or replicate the characteristics of the previous incumbent (O'Meara et al., 2020). When underrepresented groups are not included in the search committee process, biases can arise that preserve inequality in the hiring process.

2.3.2. Social mobility and classism

The Social Mobility Commission (2023) defines social mobility as the relationship between an individual's occupational income and the occupational income of their parents. According to the Standford University Student Affairs Office (2022), "Classism or class discrimination is the institutional, cultural, and individual set of practices and beliefs that assign different values to

people according to their socioeconomic class; and an economic system that creates excessive inequality and causes basic human needs to go unmet". Classism is closely related to other types of discrimination, such as racism. People who draw on Lott's (2002) definition of classism as a manifestation of social class privilege and power theorize that college students may encounter various forms of classism, including cognitive, interpersonal, and institutionalized classism. According to Fevre (2012), biased hiring and the avoidance of formal recruitment methods are often used by managers to increase their hiring efficiency or when they cannot agree on whom to hire. Fevre (2012) also emphasizes their concern that companies will not stop cloning their workforces as they judge new hires by their similarity to existing employees and believe that this will create the optimal team structure.

In some cases, hiring managers are even themselves trying to increase efficiency by not hiring well-qualified candidates from lower socioeconomic groups. Social scientists call this behavior the valuation of cultural capital (Throsby, 1999). As noted above, cultural capital (Bourdieu 1985) describes the knowledge, manners, and tastes that constitute the raw material of social distinction but have no direct impact on people's productive potential.

2.3.3. Consequences

Ultimately, these biases can lead to the wrong candidates being hired (Polli, 2019) and promote an undesirable homogeneous workforce (Derous & Ryan, 2019). The problem of a homogeneous workforce can arise because reliance on social networks tends to create a homogeneous workforce, and individuals tend to associate with those who have similar backgrounds, experiences, and perspectives. Some studies have found that diversity within the workforce plays a beneficial role in the company’s financial performance. Herring (2009) for example, found that not only gender diversity but also racial diversity within the team benefits the revenue, and even market share of the company. Silverstein (1995) found that the external promotion of a diverse workforce will also attract other potential top candidates which will provide new perspectives and therefore unleash their creativity (Silverstein, 1995). A study by Hunt et al. (2015) for McKinsey, found that companies that commit to diversity will benefit and become more successful. The study found that in the United Kingdom, women make 80 % of the purchasing decisions. It may be assumed that representing women in the company will be helpful when creating advertisements addressed to them. Thus, the study found that diverse groups within the workforce are more innate to creating innovations from which the company will benefit financially. However, some scholars have argued the opposite, believing that

homogeneous groups are more compatible and can communicate more easily and quickly. For example, Carter et al. (2010) examined the gender and ethnic diversity of the composition of American boards and their impact on firm financial performance. Their findings suggest that board diversity does not always lead to better performance. In some cases, homogeneous board composition may be more effective in improving financial performance.

2.4 Theoretical background on AI-supported hiring

When implementing a new technology or changing a process, properly managing disruptive innovation within an organization is key to its success. The following chapters aim to link key management strategies to the implementation of AI in HRM. Another key aspect of AI is its ability to pass the so-called Turing Test where a machine can interact with a human without being detected as being a machine (Turing, 1950).

2.4.1 Strategic implementation

In the dynamic landscape of business, innovation plays a pivotal role in sustaining companies. Christensen (1997) divides innovation into two main types: sustaining and disruptive. Sustaining innovation involves the refinement of existing products or services, while disruptive innovation introduces entirely new solutions to address challenges (Christensen, 1997). The incorporation of AI into recruitment represents a disruptive shift in the HRM sector. However, the implementation of disruptive innovation is faced with challenges, as users typically only accept change if the quality of the innovation meets certain standards. Scholars highlight that cost-effectiveness in an innovation alone is not the only factor determining the success of the innovation (Christensen, Raynor & McDonald, 2013).

When assessing the worth of a company scholars like Bērzkalne and Zelgalve (2014) point out the importance of intellectual capital. Within an organization, the knowledge, and insights the workforce carries with them is one of the most important performance-enhancing factors recognized by several academics like Barney (1991) or Becker and Huselid (2006). The research-based view (RBV), which was originally conceptualized by Barney (1991), suggests that resources within the company that are valuable, rare, difficult to imitate, and non-substitutable (VRIN) are most effective for driving success for a firm (Delery et al., 2017). This can be translated into the human capital and knowledge base that a workforce provides.

When applied strategically and managed properly, these VRIN characteristics help to sustain competitive advantage (Wright et al., 1994). Porter (1985) complements this perspective by proposing that competitive advantage in an industry derives from a firm's ability to create value in an amount that exceeds the costs incurred in the process. The combination of valuable, rare, difficult-to-imitate, and non-substitutable human capital emerge as a key dimension to help a firm create and maintain a competitive advantage (Crook et al., 2011). As the first and most critical step in acquiring human capital, the recruitment process presents an opportunity to leverage a disruptive innovation such as AI.

Leading companies such as Google have already leveraged technological capabilities to improve their return on human capital (Garvin, 2013). However, as the fourth most valuable company in the world (Statista, 2023), Alphabet (formerly Google) is more likely to risk-taking and gain potential benefits. However, as noted by Michael Raynor (2007), strategies with a high potential for success also carry a high potential for failure, a phenomenon known as the "strategy paradox". Some companies that choose risk aversion may miss transformative opportunities (Raynor, 2007). Christensen (1997) highlights the unpredictability of the ultimate impact of disruptive technologies, which he calls the 'innovator's dilemma'. The introduction of new technologies, especially in established processes such as recruitment, requires non-negotiable risk-taking, highlighting the importance of well-informed decisions (Barreto, 2012).

The same applies to situations where AI or data-driven technologies are used in recruiting. This includes understanding the pitfalls mentioned above, but also recognizing the potential opportunities. For example, researchers such as Marler and Boudreau (2017) state that employee productivity increases when data-driven approaches are incorporated into HR. Cost reduction is also a key factor in ensuring competitive advantage (Marler & Boudreau, 2017), as well as a motivator for incorporating AI into HRM processes (Jones, 2018). Scholars explain that by implementing AI, costs can be reduced, and processes can be made more efficient.

2.5 Disruptive innovation and the power of AI

Artificial intelligence and innovations in information technology have gained popularity in recent decades. Russell and Norvig (1995) point out that in the past humans have tried to understand "how we think". AI, however, goes beyond understanding; it aims to build intelligence. AI is disrupting many different fields, such as the automobile industry, the medical field, and the creation of literature. Researchers agree that the impact that AI will have on the world, especially the business world, is considerable (McAfee & Brynjolfsson, 2012). The ability to make predictions is what makes it valuable, and this is rooted in algorithms and models such as decision trees and regression curves. The more data provided, the better the predictions made by AI (Hecker et al., 2018). Russell and Norvig (1995) divide AI into four categories: Think Humanly, Think Rationally, Act Humanly, and Act Rationally. The scholars define the category of acting humanly as automated reasoning and machine learning, meaning that the AI can draw new conclusions and recognize patterns from what it observes. The category of thinking humanly combines cognitive science and computational models of AI. Thinking rationally refers to making logical predictions by building a computational reasoning system. Finally, acting rationally involves making correct inferences or, in the absence of information, trying to make the best possible inference.

2.6 AI in recruiting

There are several benefits of implementing AI in human resource practices. First, implementing AI in the recruiting process can save money (Jones, 2018) and improve efficiency (Niehueser & Boak, 2020). Thus, the automation power of AI allows one to take on large databases and build models that can eliminate repetitive tasks and limit bureaucratic tasks (Upadhyay & Khandelwal, 2018). The term big data has risen in popularity, it describes the data gathered by endless digital platforms, which can be fed to artificial intelligence. Those platforms include social media, cloud analytics, and Google search (Akoka et al., 2017). Scholars who study big data, for example, provide insights into algorithms that can be used in marketing (Akoka et al., 2017). AI and its abilities provide more efficient ways to make decisions by extracting patterns from existing databases using machine learning (Rhem, 2020).

Those databases combined with deep learning techniques create the chance for “cognitive computing” (Sharda et al. 2020). As mentioned by Lin et al. (2020) cognitive computing by an AI, firstly, is adaptive, meaning that it learns and adapts in real-time as the environment

changes. Second, it is interactive, allowing humans to interact intuitively with the technology. Third, it is iterative, identifying unsatisfactory solutions and conflicting information. Finally, it is contextual, solving problems in a context-specific way (Sharda et al. 2020). All these factors lead to the belief that AI can be beneficial to the practice of human resources especially within the field of recruitment.

Bouwer, et al. (2023) agree with this hypothesis and point out that conventional methods can foster discriminatory practices and may overlook primary candidates. While mentioning several opportunities to implement AI in recruitment practices they also indicate that one must be aware of algorithmic biases, algorithms are trained on data - if this data is not treated ethically or contains historical biases - the algorithm learns to adapt those biases. Therefore, they suggest that relying on it blindly does not guarantee its helpfulness. Reviewing the data is important.

A report by Ada Learning (2023) suggests that an AI is helpful in three cases, mainly when there are too many applicants, and the company needs help with tracking and screening. Those applicant tracking systems (ATS) can be powered by AI. Second, if there are not enough applicants and the company uses AI and algorithms to optimize job postings, and lastly if candidates happen to decline job matching systems too often AI can be helpful. Bouwer, et al. (2023) have suggested six domains in which AI can improve recruitment tasks: Candidate Sourcing, Resume Screening, Chatbots and Engagement, Interview scheduling, Candidate Onboarding, and diversity and inclusion. Collins (2018), for example, implemented chatbots with which candidates could interact. Through this interaction, certain information about their expectations of the job description could be collected. The report by Ada Learning (2023), however, highlighted advantages and drawbacks at every step. As for AI in candidate sourcing, it can help save time and costs, but if the AI is not trained well potential misleads can happen. AI within the screening process may overlook candidates, but it may also reduce bias and help filter large volumes of resumes. Chatbots may help improve the experience and reduce the workload of the HR department, however, they may be misunderstood if the messages are too complex. The report mentioned that the same goes for interview scheduling, as well as onboarding processes. In terms of diversity, the report points out that AI may help with promoting a more diverse workforce and reduce biases, but as mentioned above training and reviewing is crucial. Thus, it mentions the impact of emotional intelligence (EI) which describes the ability to navigate through a countless type of human emotions and interpersonal relationships. They believe it is something no AI can fully replicate (Tegze, 2023).

Some companies have even developed their own technology, such as SAP, which introduced SAP Resume Matcher, which automates the hiring process by identifying candidates with the best skills and education for specific positions. SAP (2020) promotes the tool by mentioning that it finds the ideal candidate faster and without bias. Some scholars, such as Fraij and Várallyai (2021), point out that training AI with human-based decision data could likely introduce bias, as in an example where the scholars mention Amazon's biased recruiting that was powered by AI. However, Fraij and Várallyai (2021) emphasize that to avoid such biases in the future, companies need to learn from past mistakes and keep correcting them, which is in line with the point that Bouwer et al. (2023) make. Scholars like Black and Esch (2020) also point out that the improvements in AI have paved the way to implement it in recruiting practices to improve efficacy. They believe it is a tool that is no longer nice to have but will become indispensable soon.

In the following sections, two examples of how AI is being implemented in HRM practices will be discussed. Specifically, how candidates are screened and how AI can be helpful in avoiding bias.

2.6.1 Screening

In one year, the large consulting firm McKinsey received more than 200 thousand applications and accepted about 1.1% of the applicants (Galletta, 2022). Screening resumes therefore becomes a critical task for recruiting practices and is used to analyze candidates in the first stages (Piotrowski & Armstrong, 2006). A study by Boston University (2020) suggests that recruiters spend only 6 seconds reviewing an individual resume. When analyzing what recruiters were attracted to, the study found that reviewers were distracted by visuals such as pictures. This leads them to ignore useful information such as the candidate's work experience and skills. The study also suggests that data such as the candidate's age, gender, or race may bias the reviewers' judgments. This is consistent with the findings of Derous and Ryan (2019), who found that screening applications lack validity when it comes to making inferences about applicants' character traits (Derous & Ryan, 2019). This missing validity explains unconscious biases that influence screening, such as the perception of similarity, which was previously mentioned and explained as nepotism and classism. An analysis by Kuncel, Klieger, Connelly, et al. (2013) found that even a simple mathematical equation outperforms human instinct. Based on these statistics, IBM developed its own automated screening software, PROSPECT. Researchers Singh et al. (2010) developed PROSPECT to extract information that provides

recruiters with a shortlist of candidates. The software involves several steps. The first is the 'Batch Processor', which processes all the resumes. With its modules 'Text Index Generator', 'Resume Miner', and 'Duplicate Detector', it transforms text, stores information, and extracts necessary information, such as detecting if the person has applied twice, and ranks the resumes according to the job description.

Other companies work with third parties such as HiPeople a software that promises to help find the best candidate, in an easy, fast, and biased-free way (El Hady, 2023). In their blog article, HiPeople describes that the software includes blind screening, to limit bias and base decisions solely on qualifications and skills. El Hady (2023) describes blind screening as the process of removing any personally identifiable information, such as names and pictures included in their application forms. Thus, El Hady (2023) describes that the software can parse resumes, meaning they are leveraging AI algorithms to analyze those resumes while breaking down the process of discovering qualified talents from diverse backgrounds.

2.6.2 Biases

Some scholars suggest that the AI which would replace human experts or assist in the hiring process could introduce bias and lead to a less diverse work environment. Scholars like Silberg and Manyika (2019) point to the fear of incorporating these algorithms, as they could worsen the problem. Others, however, have found that biases are introduced very quickly, especially in the screening of applicants. For example, Abrams, Swift, and Drury (2016) found that traditional job-related factors, such as the industry in which the applicant worked or the length of work experience, can also signal non-job-related characteristics, such as chronological age (Abrams, Swift, & Drury, 2016) or even ethnic background (Dovidio & Gaertner, 2000), which can influence the hiring manager's judgment. As mentioned before software like HiPeople already introduced AI-powered software to blind the resumes to limit the potential for those intangible biases. Black and Van Esch (2020) describe multiple biases that they encounter during recruitment: the anchoring bias, in which the first impression the recruiter has influenced the judgment later. The confirmation bias in which the recruiter aims to confirm his first impression. And, similarity bias, which was named before, and defined as the bias recruiters have towards applicants who are like them. The researchers have found that recruitment that is powered by AI will be less biased and more objective (Van Esch et al., 2019). Thus, they describe the advantages within the outreach and attraction stage of recruitment, within screening, and assessing the candidate. In the stage of reaching out to the potential candidates

L’Oréal, for example, used AI to eliminate potentially biased wording that may indicate gender bias. According to Sharma (2018), this helped them to attract a balanced gender split they had not achieved before. As for screening, they found that not only the time it took to hire someone decreased, but also the effectiveness. As for the assessment, the researchers also describe chatbots such as Maya, which is used by L’Oréal.

However, Gold (2017) emphasized that tools like these screening algorithms are unlikely to produce the desired results if they are not properly calibrated. If you feed biased data to an AI, it will produce biased results. Scholars such as Greenfield and Griffin (2018) suggest that the implementation of AI in HRM can lead to unbiased hiring. This is an area that scholars have been exploring increasingly over time, and they call it equitech. Equitech is about how AI can reduce bias and improve equity (Lin et al., 2020). The researchers have developed a framework that can be applied to address implicit bias in recruiting. They believe that through machine learning, supported by experts, the bias patterns of individual recruiters can be modeled and used with data collected during actual interviews to predict the level of bias of the recruiter. In their research, they developed a framework consisting of two dimensions. The first captures the different types of information that AI provides to its users: descriptive, predictive, and prescriptive information. The second dimension captures the different points at which AI can be implemented - input-based information, which may be the applicant's resume. As well as output-based, which might be discriminative words in a job advertisement. Cognition-based information is the amount of knowledge the recruiter has about biases. Within the input-based approach, Lin et al. (2020) introduce several AI techniques to limit bias.
Anonymization of the CV within the screening stage is one of those techniques. It involves concealing the demographic information of the applicant which may bias the judgment of the recruiter.

The scholars mention various existing tools such as Textio Hire, a software that proposes synonyms and replaces commonly known biased expressions. In terms of the cognitive approach, scholars highlight the software that teaches recruiters to restrain from their biases.

Methodology

3.1 Research Design

The following analysis is based on qualitative data analysis, specifically semi-structured interviews (Bryman & Bell, 2011). There are several major advantages of semi-structured interviews, one of which is in-depth understanding. The expertise of the interviewees will provide highly valuable insights, especially when analyzing multifaceted topics like this, semi-structured interviews provide the right amount of flexibility. This flexibility is helpful when trying to understand the different viewpoints, perspectives, and behaviors of the interviewee (Bryman & Bell, 2011). Modifying questions was helpful to gather specific insights from different perspectives on the matter. This structured framework assisted in comparing the findings (Bryman & Bell, 2011). By comparing the different perspectives of experts and young professionals with academics, this dissertation also aimed to understand the possibilities of AI in practice and academic theory (Huselid, 2018; Minbaeva, 2017). To reduce the possibility of bias and to explore as many insights as possible in the interviews, the questions were kept open-ended. At the end of every interview, four Likert scale questions were raised to get a clear understanding of the attitudes towards AI and its potential in HR. The outcome of the Likert scale questions was analyzed by using graphs to visualize trends in the data (Adams, 2015). To respect the interviews, each person was asked if they agreed that the interview would be recorded and that the recording would be handled responsibly and not shared with third parties without their consent. Finally, the interviews were analyzed according to the procedure of Mayring (1994).

3.2 Data collection

3.2.1. Primary data collection

The 14 semi-structured interviews took place online and were recorded. However, all respondents did not wish to share the findings with third parties. Two types of interviews were conducted. One with experts in the field of HR and AI and how they perceive the impact of AI on hiring processes. The other was with people and young professionals from different industries who experienced those practices. To still have a coherent thread and to align the findings of the experts in the end, an interview guide was used that was similar for both groups, experts, and young professionals.

3.2.2. Secondary data collection

The findings of the interviews and Likert Scale questions were then compared to the secondary data found in the literature review. Facts and figures from management theories but also from industry-specific papers were taken into consideration while comparing the findings.

Analysis

Following Mayring's (1994) approach to analyzing qualitative data, the interviews were partially transcribed and overarching themes to the interviews were identified, this helped to compare the findings of the interviews. The keyword analysis helped with identifying trends and opinions the experts shared. All the keywords were at least mentioned twice.

Three different types of interviews were conducted to shed light on the research question: "Can AI mitigate hiring biases, encouraging a more diverse workforce?". HR and management professionals were asked about their perspectives on diversity, recruitment practices, and their opinions on the helpfulness of AI within these practices. Young professionals were interviewed to gain insight into their opinions and perspectives on AI when going through an application process. Thus, young professionals highlighted the differences in recruitment between different industries, including legal, medical, and consulting industry. Finally, AI engineers and experts were asked to share their knowledge. A total of 14 interviews were conducted.

4.2. Keyword Analysis

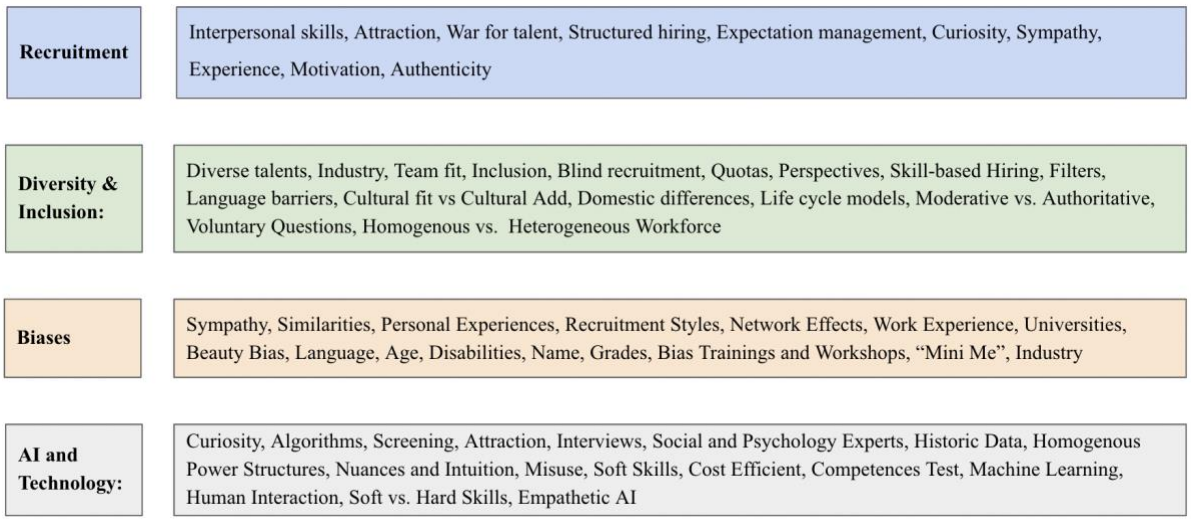

Figure 1: Keyword Analysis

In general, the interviews started with some questions about the participants' backgrounds. The group of HR, management, and AI experts had an average of 20 years of experience in the field, and the AI experts had about 15.7 years. In total, 57% of the respondents were male (8), 43% female (6). The average age between experts was 41.

Most of them were based in Germany, and only one respondent was based in the UK. Of the 14 participants, 78% were professionals, of which one was an AI engineer, and the rest were human resources professionals and management experts, 22% of the respondent group were young professionals. The average age between young professionals was 24, while two of them were female and one was male.

	Age	**No. of participants**	**Percentage**
Experts	Below 30	2	14%
	Between 31 and 40	4	29%
	Between 41 and 50	2	14%
	Over 50	3	21%
Young professionals	Below 30	3	21%
Total		14	100%

Table 1: Age Diversity

	Gender	**No. of participants**	**Percentage**
Experts	Male	8	57%
	Female	6	43%
Total		14	100%

Table 2: Gender Diversity

	Role	Industry	No. of participants
Experts	CEO	Advertising	1
	Head of HR	Publishing	1
	Vice President People	Food	1
	Senior Associate	Consulting	1
	Global Talent Director	Technology	1
	Founder	Technology	2
	Managing Director	Medical	2
	CMO	Insurance	1
	Recruiter	HR	1
Young professionals	Junior Associate	Law	1
	Junior Associate	Consulting	1
	Assistant Doctor	Medical	1
Total			14

Table 3: Role diversity within the experts

4.2.1 Analysis of the interviews

Recruitment style

The analysis of keyword revealed varying opinions among the experts regarding their recruitment styles (see Figure 1). In general, there were three main themes and priorities within the recruitment styles of the experts: The personal and interpersonal connection, the focus on diverse recruitment, and the importance of the attraction and outreach phase that happens initially.

Personal and interpersonal connections

Especially Interviewee 1 and Franz Oertel placed great emphasizes on personal connections and shared interests within their hiring, which they later acknowledged may induce some biases.

"Sharing a laugh and having the same humor is something that shows me that we would be comfortable working in a team. That's what counts most when I recruit." – Interviewee 1, Manager Advertising Business

Four of the interviewees emphasized the importance of interpersonal skills and open-mindedness within the first interviews. They pay direct attention to the curiosity the applicant signals to, for example, acquire a new skill rather than proving an already existing perfect skill set.

Diverse recruitment

Carmen Lopez focused on creating diversity and inclusion in her teams through fair and attractive job descriptions. Interviewee 3 agreed and highlighted the importance of transparent expectation management. Making the process as fair as possible. Matthias Schmeisser advocated for structured hiring with clear expectations, i.e., his applicants know the recruiter's profile, how long the interview will take, what role will be discussed, and what are the key expectations of the position of the job, to create fair expectations for hiring.

Attraction and Outreach

Approximately 40 % of the experts highlighted the attraction stage in which they are reaching out to talents and the transparency about the job description and the company. Steve Plesker, CMO at AOK one of Germany's largest public health insurers pointed towards the war of talent, which led him to believe mastering the phase of reaching out to the right talents at the right time is most important when it comes to good recruiting. Alexander Holtappels, as he described his recruitment style as “different” - he believes that recruitment starts before the screening of the CVs. Subsequently, he emphasized positive word-of-mouth advertising about the company is an essential part of recruitment.

“The best recruitment style is happening if the company works well, and the team is strong. You should do good and talk about it.” - Alexander Holtappels, Manager in the medical industry

Ana Christina Grohnert the former Chief Human Resources Officer at Allianz Germany, and one of the few female top managers in Germany underlined the importance of the attraction phase by pointing out that the kind of imagery or communication the company uses is important in attracting the right talent. This kind of external communication represents what the company is already made of, she points out, highlighting when leadership positions or panels organized by the company are mostly white males - that is what the company attracts. Ana Cristina believes the key is to change that external communication but also to make changes internally to be able to attract diverse talents. That is what makes the job attractive and the offer authentic.

While fostering a gender quota, she pays attention to equal pay according to the Gaussian normal distribution curve.

Diversity in the workforce

As mentioned above, diversity already plays a crucial role when it comes to scouting for talent. The interviewees were asked to shed more light on the way they promote diversity within the companies. In general, the interviewees pointed towards the multitudes of diversity they perceive to be significant, such as gender diversity, age diversity, and social background. Thus, the experts highlighted that there are some obstacles when it comes to facilitating diversity, especially the spoken language within the firm and the industry.

Blind hiring

To promote diversity, Carmen Lopez mentioned that she uses a blind hiring process and cognitive tests. These blind tests were also mentioned by three other interviewees, all pointed out that erasing information like the name, the age, and information where the person grew up would help eliminate biases in the first place. One interviewee concurred and even mentioned that ideally, Germany should agree on a standardized bias-free CV excluding pictures, age, and address - that is legally required. Ulrike Dahl, however, disagreed because she employs people who work in brick-and-mortar stores all over Germany and their appearance does matter. For example, she pointed out that she and her team screen applicants for tattoos that might indicate right-wing extremist signs or speech. Dahl also mentioned that she finds diversity in age within her employees particularly important. As older and more mature employees or applicants tend to be very structured and enjoy meticulous work, she is also very fond of young employees and is building an academy where young talent is scouted and nurtured. To attract students, for example, she is building an easy payout system where they can be paid any time of the month, so they don't have to wait until the end of the month.

Diversity quotas

Franz Oertel mentioned BCG's commitment to diversity quotas and acknowledged bias, but actively works to counteract it. At BCG, they use Excel sheets that screen for diverse backgrounds, such as non-academic parents. This helps them score higher on internal assessments. Ana Christina Grohnert has had a great impact on restructuring firms to become more diverse starting with the female-male division in the company and highlights the importance of equal pay that comes with it. To attract diverse talents, she implements various

tools and standards like “life phase models” which benefit people differently according to their current stage in life. Thus, she made jobs accessible to all types of disabled employees. Grohnert also mentioned that asking for diversity factors is very delicate. She made the example of asking a CV question like: “Are you responsible for other family members”. She also points to the dark digits in the outing as a disabled employee, such as having difficulties hearing. This is something she focuses her leadership style on. As a founder of the “charter of diversity” - she highlighted the importance of social backgrounds and making leaders aware of biases like classism. Within recruiting she pointed out the dimensions that are not visible - like being a visionary or introvert this must be something the recruiters should be aware of.

The top manager Steve Plesker referred to his social background and called himself a “workers child” in German an “Arbeiterkind” with the expression he is one of the most popular voices on LinkedIn talking about how social background reflects on the person’s career. In line with the findings by BCG, he agreed that working-class children have a harder time achieving their career goals than others from academic households. Steve Plesker pointed out that growing up in poor surroundings made his will to be promoted and get into leadership roles even greater. Thus, when recruiting he looks out for potential talents that may have grown up in poorer neighborhoods. He points out that he takes responsibility for creating a diverse workforce, however, points out that one barrier is the language spoken in the company which is only German. This would suggest that blind hiring could also be an obstacle to promoting diversity as information on social backgrounds would be valued and not judged.

Facilitating diversity

However, Alexander Holtappels and the HR expert Gesine Schulz found that language barriers often hinder the process of employing a diverse team, especially in the German labor market. If the main spoken language is German, diversity becomes harder to foster and biases are obvious and benefit German speaking applicants. Steve Plesker and Alexander Holtappels also agreed that the company and industry determine what kind of people are attracted - both gave the example of working in technology which is mainly a male dominated sector.

“If you apply a diversity filter based on gender in the IT industry you will not be able to find anyone, especially due to the lack of working professionals.” - Steve Plesker, CMO at AOK

Matthias Schmeisser advocated for skills-based hiring to eliminate bias in traditional methods. Skill-based hiring means that the assessment of a candidate is not based on CVs and cover

letters, as he believes these do not fully relate to future job performance, and decisions are not based on valid criteria about performance - which he mentions leads to bias (pictures, how its written, schools, experience) - he pointed out that 50% of CVs are based on lies. And not only do candidates lie - but recruiters do also if they are not prepared. Matthias believed in skills-based hiring because it allows more candidates to apply as, in the first step, they only must submit their name and email address. In the second step, they take a 20-minute test based on the skills they will need in the job. These tests are situational and question the applicant's behavior. According to Matthias, this helps to evaluate candidates solely on their skills, it helps with objectivity, and some tools even provide feedback that can be sent to the candidate afterwards.

Biases

In terms of biases, the experts mentioned multiple specific biases and situations in which they encounter those.

Similarity bias and classism

Almost 80% of the interviewed experts noted that having something or someone in common can easily bias their judgment, which leads to believe that classism is still found in hiring today. One interviewee admitted that having people in common or having had some kind of connection before meeting the candidate biases his judgment. Matthias Schmeißer mentioned that if an application process only includes interviews, companies are more likely to favor extroverts who may lack other skills, such as specific skills. He also stated that classism is fostered by surname and associated family wealth in Germany.

Biases triggered by the CV

Matthias Schmeißer also spoke about other biases he encountered, including years of experience and the impact of big company names on resumes. Sebastian Schüller, the founder of the software tool HiPeople, criticized screening processes in which companies use parsers to screen CVs - and in general points out the potential for bias when CVs are scanned. Steve Plesker agreed and pointed out that pictures will bias recruitment processes, as well as names and beauty standards. He mentioned that some of his peers will not accept CVs without pictures. Four of the respondents highlighted and criticized the beauty bias. That is, if the applicants look nice, some still infer that they are more capable.

In terms of skills represented on the CV, Sebastian Schüller used the example of listing Excel as a skill on a resume and mentioned that this does not reflect the person's skill level in using Excel. And in a job where Excel is crucial, this will define how good the hire was made. So, he pointed out that in his experience, the way companies screen their applications is fatal. Some companies he talked to use students or interns to screen the first batch of applicants with the sole goal of minimizing the number of applications - this type of screening has a lot of bias.
He believed that AI is especially helpful in terms of assessment tests, but also in terms of screening, as it still minimizes the chance of bias. Interestingly, he also questioned the 6 seconds that some recruiters say they take to scan resumes, assuming that there is a lot of incentive behind saying it only takes them 6 seconds. If they take longer, they are more expensive for the company.

AI integration

Respondents held diverse opinions on AI technologies in recruitment, with 80% of experts considering or already utilizing AI to address biases, while 20% remain skeptical. Criticisms primarily revolved around AI's reliance on biased historical data. Notably, most respondents favored AI implementation during the screening stage, aiming to extract valuable information while excluding biased factors like age and appearance. Three respondents expressed keen interest in skill-based tests, advocating for their potential to assess candidate fit based on job descriptions and sources like OpenAI, minimizing bias found in traditional CVs. Additionally, cutting costs through AI is seen as advantageous, as exemplified by Ulrike Dahl who was intrigued by its potential for her company which processes over 5,000 applications annually. Ulrike's company, being large and diverse, employs an off-boarding process to scout and screen workers on the job, aligning with a skills-based approach. Sebastian Schüller, co-founder of HiPeople, acknowledged the growing potential of AI in HR, emphasizing the need for societal familiarity with AI tools. HiPeople's three AI integration types focus on question creation, cheating detection, and contextual analysis, offering a holistic approach to candidate assessment.

Sebastian Schüller founder of HiPeople highlighted AI's efficiency in contextualizing candidates, contrasting traditional assessment tests as outdated and expensive. He noted AI's potential to mitigate biases in skills assessment, aligning with the changing value of credentials and skills over time, as observed by Matthias Schmeisser. Sebastian cited a Nestle recruiter's positive experience with an AI-supported tool, suggesting efficiency gains.

While some emphasized the efficiency of AI-driven processes, others stressed the importance of human interaction, nuanced decision-making, and potential soft skill loss in a fully AI-driven recruitment process. Steve Plesker, for example, questioned AI's ability to interpret keywords while he emphasized the importance of well-trained recruiters, who have specific job-related knowledge. Steve Plesker and Alexander Holtappels again underscored the significance of job and company attraction and saw the potential for AI being helpful within this stage.

Ana Christina favored anonymizing CVs with AI to reduce bias but acknowledged AI's training on historical data with inherent homogenous power structures. She believed AI, is currently not suitable for unbiased recruitment. In line with Holtappels', she underlined the importance of competencies that are currently measured with various personality tests that focus on competencies like being a driver, doubter, or a moderator in the company. However, she thought that AI has potential if it is well trained. Carmen Lopez viewed AI as a tool for fair and efficient processes within the screening as she uses it already to "unbias" CVs in her company. Franz Oertel remained critical, emphasizing the irreplaceable nature of human interaction in assessing a person's fit with a company.

Management styles

A few respondents pointed towards the management style that comes after recruiting a diverse team. Empathy for employees is seen to be very important. Steve Plesker highlighted this by mentioning that people who lack empathy but only have expertise may be great experts but cannot be placed in management positions. Ana Cristina Grohnert stated that management should be more moderative than authoritative, teams managed this way are most successful. This is in line with Holtappels' understanding of good leadership. After years of experience in HR Ana Cristina also mentioned the similarity bias and pointed out trust issues. People that seem familiar are more likely to be trusted. However, she advises against it, saying making fast decisions is not as important as looking at different options of action. Those are only found in more diverse teams as everyone brings a different perspective and respect towards certain topics which will help address solutions. To foster diversity, she believed the management has to understand that diversity is multidimensional. A woman may also be a mother, coming from a lower socio-economic class - this type of multidimensional diversity should be considered and respected by firms. She mentioned practical tips like the previously mentioned "life phase models".

Gesine Schulz works as a recruiter in the Start-up scene in Berlin. She also highlighted the difference between metropolitan cities like Berlin and other more rural areas in Germany. This was supported by Interviewee 3. Recruiting in a large city makes attracting and recruiting diverse talents easier. However, Schulz mentioned that her job as a recruiter is to fill the open vacancy. Her priority is to find someone for the job that the person from the company is happy with, rather than finding the most diverse talent or creating a more diverse team with that person in the company. She also pointed out the advantage of homogeneous workforces, observing that people who "speak the same language" in terms of experience, social background, etc., work faster and easier. However, the company will lack perspectives.

“Especially in Berlin based Start-ups founders are looking for Mini-Me’s to join their team”- Gesine Schulz, Recruiter in Berlin, Germany.

To get an overall understanding of how the experts felt about AI and the potential to mitigate biases in the hiring process, four 7 Point Likert-scale questions were raised at the end of the interviews. Those Likert Scale questions were analyzed with a correlation analysis between age, experience, and the score of the Likert Scale questions was conducted with the help of RStudio. This helped to further analyze the statements by the respondents based on their age and years of experience in the field.

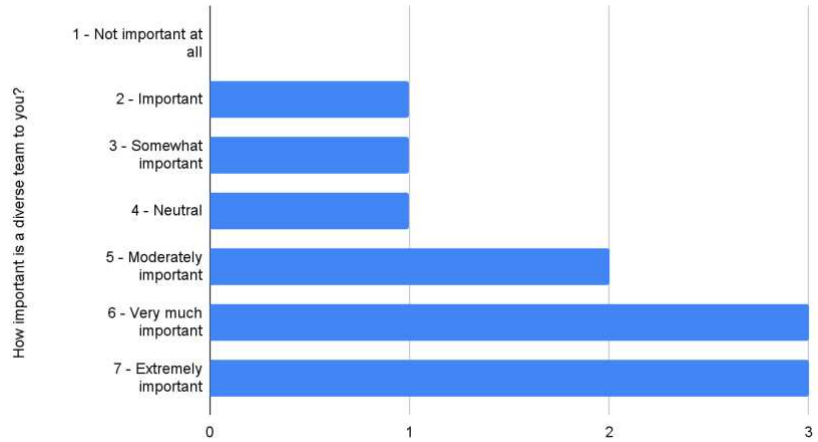

Figure 2: Answer to Likert Scale Question, How important is a diverse team to you?

To shed more light on the perceived importance of diversity by the experts a correlation analysis was conducted with the help of R-Studios to examine the relationship between the variables "score", which in this case indicated the score on the 7-point Likert Scale regarding the perceived importance of diversity, "age", and "years of experience". The correlation coefficient between "score" and "age" was found to be statistically significant with $r = -0.208$, $p < 0.05$. The negative correlation indicates a weak inverse relationship, suggesting that as age increases, the perceived importance of a diverse team decreases slightly.

A significant negative relationship was found between the variable "score" and "years of experience", $r = -0.178$, $p<0.05$. This indicated that on average respondents with more years of experience perceive a diverse team composition as slightly lower.

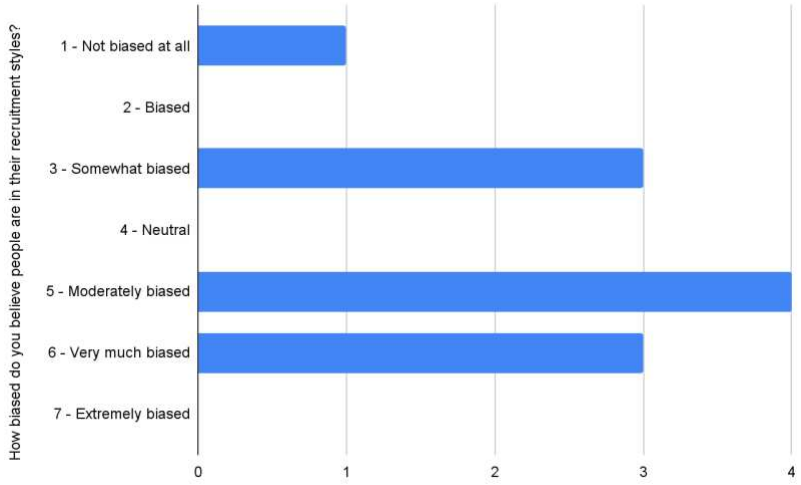

Figure 3: Answer to Likert Scale Question, How biased do you believe are people in their recruitment style?

To find out more about the perceived biases in recruitment styles a correlation analysis was conducted to examine the relationships between the variables "score", which in this case referred to the score on the 7-point Likert Scale regarding the biases in recruitment, "age" and "years of experience". The correlation coefficient between "score" and "age" was found to be statistically significant, $r = 0.478$, $p< 0.05$. This positive correlation suggests a moderate positive relationship, indicating that as age increases, the perceived bias also tends to increase. Similarly, a significant positive correlation was observed between "score" and "years of experience", $r = 0.454$, $p< 0.05$. On average, individuals with more years of experience tend to perceive more bias.

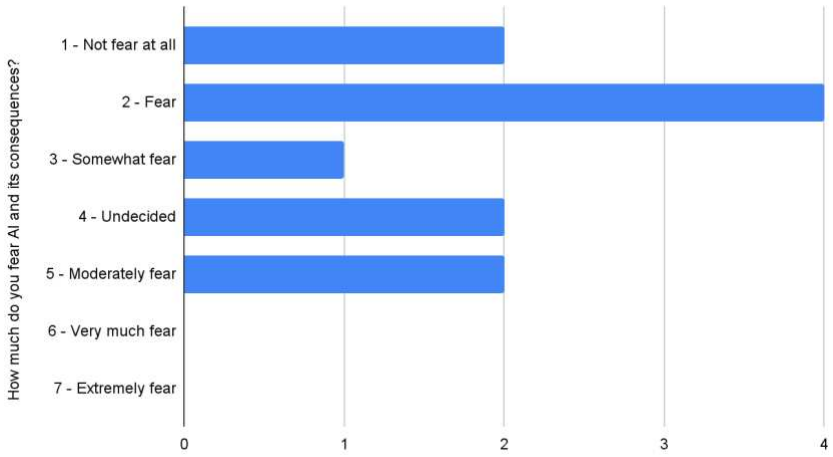

Figure 4: Answer to Likert Scale Question, How much do you fear AI?

To determine how the age of the respondent and the years of experience are related to the fear of AI, a correlation analysis was conducted. The correlation coefficient between "score", which is in this case related to the fear towards AI in general, and "age" was found to be statistically significant $r= 0.209$, $p<0.05$. This positive correlation suggests a weak positive relationship, indicating that as age increases, fear of AI increases slightly as well. For the relationship between the variable "score" and "years of experience" no statically significant correlation was found $r= -0.006$, $p> 0.05$.

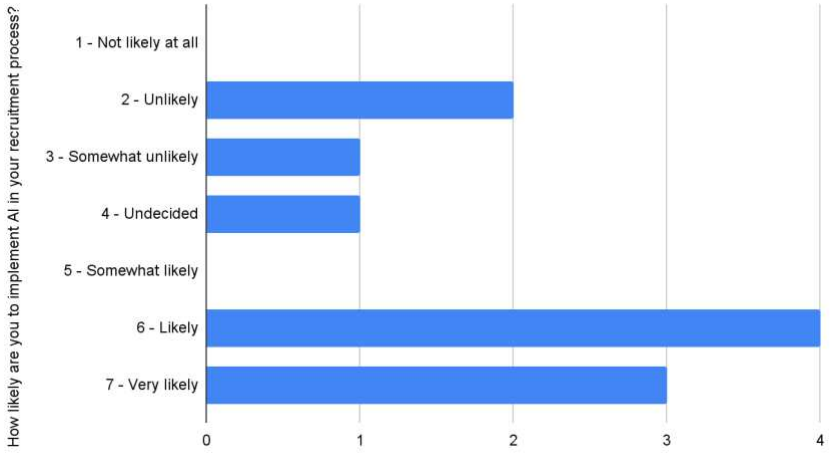

Figure 5: Answer to the Likert Scale Questions, How likely are you to implement AI in your recruitment process?

Another correlation analysis was performed to find out more about the likelihood of implementing AI. The correlation coefficient between "score", which in this case refers to the

likelihood of implementing AI in recruitment processes also measured on a 7 Point Likert Scale, and “age” was statistically significant r= -0.225, $p<0.05$. This weak negative correlation suggests that as age increases, the likelihood of implementing AI in recruitment decreases slightly. The correlation coefficient between “score” and “years of experience” was also statistically significant r= -0.398, $p<0.05$. This also negative correlation suggests a weak negative relationship, indicating that as the number of years increases the likelihood of implementing AI in recruitment tends to decrease.

4.2.2 Analysis of young professionals’ opinion towards current recruitment and AI

Attitudes towards AI in recruitment

Attitudes toward AI are similar among young professionals but show some nuanced differences. Max Heudorfer expressed a generally positive attitude toward the use of AI in recruiting, recognizing the potential benefits of efficiency and innovation. He highlighted a potential concern that the use of AI could put him at a disadvantage, as he perceived his strength to be in human interaction and the name of his university. However, he pointed out that this concern is not valid, as it is more to his advantage than the company's level of fairness in hiring. In contrast, Deniz Aydin mentioned that she perceives AI in screening processes as fairer as she has a migration background with her parents coming from Turkey. She emphasized that she has experienced situations in which her name Deniz, which can be interpreted as both male and female, and her surname Aydin, which suggests a Turkish background, have been at her disadvantage when applying to companies. She emphasized that prejudice and stereotypes are common in the consulting industry and that as a young woman from a migrant background, she often feels that she must prove herself even more. However, she recognized that face-to-face interviews are important for her to get a sense of the energy and dynamics of the team in which she might eventually work. She has already experienced an entirely AI-driven interview at L’Oréal Paris, which she did not like. She mentioned that the interview with the "Roboter" felt unrealistic. In the future, she will no longer apply with them as she did not feel recognized and appreciated. From her understanding, the company valued cost and time efficiency more than her application. However, she noticed that the use of AI after the initial recruitment process, in onboarding and contract drafting can be very helpful for both sides, as it saves time on both sides. Max Heudorfer's and the young doctor's responses were in line with this, as he appreciated the idea of using AI for bureaucratic tasks and reducing unnecessary interactions, such as scheduling interviews or chatbot-assisted onboarding processes. The doctor was positive about AI and saw its potential to streamline processes and make them fairer. However,

she noted that AI in screening processes could be detrimental to the field of medicine, as empathy is a very important characteristic of a doctor or anyone working in the field of medicine; she pointed out that she would rate this as a critical skill. This highlights the importance of specific human qualities and soft skills that AI may not fully understand. The doctor saw the benefit of AI in creating fairer processes, particularly in the use of blind resumes. She emphasized the importance of fairness in hiring. Both respondents were generally positive about AI and recognized its potential benefits in hiring.

This shows the potential for employees and AI. One interpretation could be that employers can be transparent about the purpose of using AI, address concerns about potential downsides, and highlight the aspects where AI improves the process. Creating a recruitment process that values both human qualities and the efficiency of AI could be critical to attracting a diverse pool of candidates. Innovation and fairness should be key messages in employer branding efforts related to the use of AI in recruitment. It may also be observed that all young professionals like the idea of implementing AI after the initial recruitment process, within onboarding processes to avoid lengthy bureaucratic processes. However, it must also be noted that the more experience they had, the more they were convinced that recruitment is biased and suggests that solutions should be found. It can be concluded that against what Sebastian Schüller says AI has already been accepted by society – most experts still do not fully trust it. But in general, everyone agreed that if the AI is trained well and is fed by more recent less conventionally biased data it may help reduce biases. At least some of the experts already trusted AI in the screening process – which suggests that the innovation is accepted by some, but the quality is not yet good enough to be fully implemented in the HRM practices yet.

Discussion

To answer the research question: “Can AI mitigate hiring biases, encouraging a more diverse workforce?” there are multiple factors to consider. According to experts interviewed and the literature revised optimal utilization of AI to avoid making biased decisions while recruiting depends on when and where it is applied. Some information collected during the interviews and literature review points towards a positive perception of AI integration in HR practices to mitigate biases and even encourage a diverse workforce.

Attraction and Outreach stage

Experts believed that when it comes to attracting diverse talents the content and information communicated externally will have an immense impact on the type of person that applies to the company. Continuous work on external communication is needed to attract diverse talents, AI may help with that. In line with findings by Lin et al. (2020) a broader spectrum on gender within job descriptions and vacancies, for example, will make more diverse talent feel welcome to apply.

Screening and Blind Hiring

Most respondents agreed that using AI in initial screening, especially in sorting and pre-organizing CVs, can be helpful. Lin et al. (2020) pointed towards the input-based approach, in which several AI techniques help to limit bias, for example by anonymizing the CV within the screening stage. Leveraging AI to “blind” CVs by removing biasing information like name, age, and social background are recognized as valuable within literature and among experts. These findings are, for example, underscored by a study mentioned in the literature review from the National Bureau of Economic Research from 2021 which discovered that distinctively black names reduce the probability of being reached out to by the employers by 2.1% in comparison to typically white names (Kline, Rose, & Walters, 2021).

Skill Based Test

In addition, AI's role in skill assessment is generating significant interest, with skill-based tests and tools like HiPeople are seen as effective in predicting hard skills. Disregarding any other provided information and making use of those skill-based tests which are powered by AI may help mitigate biases that are induced through unnecessary information such as a picture. But it must be noted that this cannot be translated to any industry or job description as mentioned

before. Some industries require checking pictures or assessing soft skills. Experts believe They are best assessed through human interaction.

Cost and bureaucracy efficacy

Apart from mitigating biases, most respondents agreed that AI is especially helpful in cutting costs and limiting bureaucratic tasks in larger firms. Limiting costs that arise with recruitment is one key motivator for incorporating AI according to Jones (2018). However, it must be considered, that researchers like Christensen, Raynor, and McDonald (2013) found that the quality of the product is the selling point, cost efficiency alone is not enough to switch from a known process to a new disruptive innovation like AI in HR processes. Particularly young professionals though valued AI within onboarding processes to increase efficacy and cut waiting times for information transfer. In this case, AI may help provide everyone with the same information at the same time and make the process fairer thus mitigating any biases.

The previous findings discuss the potential of implementing AI to mitigate biases and create a diverse workforce. Some experts and literature, however, would not agree with those findings and argue that AI is not capable of mitigating biases and not encouraging a diverse workforce.

Language barriers

As mentioned, some experts believed that integrating AI to mitigate biases may be helpful but certain basic requirements must be fulfilled to benefit from it. Speaking the same language, for example, is one of those. If everyone speaks English, it is easy to hire more diverse talents to join the teams. Nonetheless, if that is not the case, diverse recruitment in the first place is harder.

Industry barriers

Thus, experts highlighted the difference between recruitment in urban and rural areas. Whereas cities offer more potential for AI usage to eliminate bias than rural areas. Second, industries are a crucial factor deciding whether AI implementation makes sense. Industries in which soft skills are valued are more critical towards AI’s potential to limit biases. This is in line with Derous and Ryan (2019), who point out that screening applications are less valid in making inferences about applicants' character traits and therefore in assessing soft skills (Derous & Ryan, 2019). Thus, the tech industry, for example, is mainly attractive to male applicants. Applying a gender diversity quota would only limit the chance to find potential talent.

Historical data

The quality of AI in recruitment was still criticized by many. Most of the experts believed that the historic data the AI is trained on is still too biased in terms of old homogenous recruitment patterns. This is in line with the findings within the report published by Ada Learning (2023) that mentioned that relying on AI blindly does not guarantee its helpfulness, because if the AI is not trained properly potential misleads may happen and overlook talents. Bouwer et al. (2023) also suggested that reviewing data for biases is necessary.

Interpersonal connection

The most common critique on integrating AI in recruitment processes was not based on diversity efforts but on the fear towards AI taking over. The critics said that to invite someone to join their team they need to experience some type of human interaction. Based on the correlation analysis, it can also be noted that the older the participants were, the more they feared the implementation of AI. This notion is also supported by a young professional working in the consulting business. She experienced the chatbot Maya used by L'Oréal to interview candidates after they passed the first screening. She did not like the experience and described it as superficial and something she could not take seriously.

Unstructured CV bias AI

Others pointed out that the problem is not the biased historic data, but the way CVs are not submitted in a standardized way, and therefore an AI will have difficulties analyzing and sorting through them correctly.

	Positive attitude towards AI	Negative attitude towards AI
Experts	AI within the attraction phase	Language barriers
	Blind Hiring	Industry barriers
	Skill-based Tests	Historical Data
	AI within the screening phase	Interpersonal connection
	Cost and bureaucracy efficacy	Unstructured CV
Young professionals	Limiting bureaucratic tasks	Unfair treatment during screening
	Fair treatment within the screening	AI-driven software

Table 4: Summary of Attitudes towards AI in Recruitment

Conclusion

To answer the research question: "Can AI mitigate hiring biases, encouraging a more diverse workforce?" 14 interviews were conducted; 11 diverse experts shed light on their perspective on biases and AI while 3 diverse young professionals provided insights into their perception of recruitment processes powered by AI (see Table 3). Thus, a correlation analysis provides further insights. This primary data has been compared to the secondary data provided in the literature review within the discussion part of this thesis.

Providing answers to the research question discussed in this analysis is especially important in the current job market in which consulting firms like McKinsey receive more than 200 thousand applications and accept about 1.1% of the applicants (Galletta, 2022). Meanwhile, the war for talent is not only taking place within the consulting industries but is present in most industries as some of them are represented through the interviewees. Finding the right candidate while promoting diversity can be challenging. Herring (2009) found that diversity is beneficial to a firm's financial performance. However, choosing the right talent is difficult, with only a 50% success rate (Booker, 2021). The findings suggested that, in some instances, AI is already able to mitigate bias. The analysis found potential use cases in which AI already is helpful in driving

a diverse workforce and mitigating biases. This includes AI within the attraction and outreach phase, in which AI can help find the right images to attract a diverse set of applicants. This analysis thus found that AI helping firms in anonymizing resumes already provides a lot of potential misjudgments that may be triggered by fast thinking. That is why Kahneman (2011) suggests that the recruiter takes time to form an objective picture of the candidate rather than impulse judging CVs based on certain information that may be misleading. Therefore, in terms of screening AI can be helpful to prevent this from happening. However, as mentioned before this may not work in all industries, as some require basic judgment based on looks. Disregarding resumes fully and only relying on skill-based tests powered by AI also potentially mitigates biases as solely skills are judged rather than any misleading information provided by CVs. Another benefit experts and literature highlighted was the potential for cutting costs while using AI. This does not directly benefit diverse recruitment, but it may in the long run provide financial support for training management teams on how to guide and lead diverse teams.

However, there are also cases in which AI is not yet able to mitigate biases. Experts and literature pointed out that obstacles like language or industry barriers do not even create the chance for hiring diverse. The biggest critique so far is that AI is trained on historic data, which until now is still trained by biased and untrained data. Professionals, thus, point out that the screening of CVs can only take place if the CVs are standardized.

In conclusion, although the opinions vary and some of the experts are not able to trust AI tools yet to fully mitigate biases in recruitment the majority is open to using and adapting to it step by step. All of them agree that recruiting is still biased, and solutions should be found while leaving opportunities to implement AI.

This thesis contributes to a contextual understanding of AI in recruitment and provide the insight that in terms of AI in recruitment, there is no “one size fits all” process yet. Thus, the experts helped to point out the differences in the assessment between soft and hard skills which they presume is not yet something AI can differentiate correctly. Hence, the interviews provided practical insights such as the need for more standardized and structured data input, while pointing out that biases within AI not only stem from historic data but from the way CVs and other application forms are not standardized when submitted. The analysis also provides insights on management and leadership styles to foster diversity.

As two different groups were interviewed, experts and young professionals, the study benefits from both points of view. The Likert Scale questions provided insight into age-related differences in terms of the perception of AI in recruiting, pointing out that older participants feared the integration of AI more than younger ones. This adds to the socio-cultural factors influencing the acceptance and adoption of AI.

Limitations and future research directions

This thesis mainly relied on qualitative data, including 14 interviews with experts and young professionals. Four 7 Point-Likert-Scale questions provided some quantitative data, however in the future more in-depth quantitative research may provide more information.

Thus 14 participants are a relatively small sample size and may limit the generalizability of the findings to a broader population and other industries. Future research could aim for a larger and more diverse sample to enhance external validity. Subsequently, the study relied on the participants' perceptions of AI and biases, which can be subjective. Thus, the findings are mainly important to larger companies in which the number of applications may be automized and manual labor would be more costly. Future research should concentrate on one industry to generate deeper insights. As the interviews were not randomly selected but approached mostly on LinkedIn, this does not guarantee that all experts' insights are fully represented, but only the opinions of the participants who answered the cold calls via LinkedIn. As the interviews were all conducted in the period of one month the study adopted a cross-sectional design, capturing only a snapshot of participants' perspectives at a specific point in time. A longitudinal approach could provide insights into the evolution of perceptions and the impact of AI-driven software on biases in recruitment over time a longer period.

Even though the semi-structured interview style was used, interviewees might have exhibited response bias due to the nature of the questions, potentially providing socially desirable responses. Especially because the topic of diversity nowadays is highly discussed and valued by talents and applicants in most industries. Utilizing additional research methods, such as focus groups or experimental designs, could mitigate this limitation in future research. As for future research regarding AI, it is important to note that a lot of the interviewees were critical about AI as it is based and trained on historical data which is still very much shaped by old standards and biases. It would be insightful to do this analysis again 10 years from now to look at how

much the status quo has changed and developed. Plus, a lot of experts were highlighting the emotional intelligence that an AI is potentially missing, it would be worth investing time to find out more about the development of this in a couple of years. Unfortunately, the expert developing an empathetic AI in Germany did not respond to the invitation to take part in this thesis.

And lastly, the study did not engage with the topic of the ethical implications of AI in recruitment, particularly in terms of privacy rules due to the limitation of space. These factors should be considered in future research.

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Appendix

1. Summary of the interviews with experts from management, HR, and AI

	Respondent	**Demo-graphics**	**Current role**	**Industry/ Company**	**Experience**	**People recruited**	**Key-word**
1	Interviewee 1	54, male	CEO	Advertising	Entrepreneur, Founder of advertising company, has been working in the company for **25 years**.	ca. 600	Expert
2	Carmen Lopez	35, female	Head of HR	Major publishing company	Head of HR in Berlin. More than **5 years** of experience in recruiting and HR management in several international companies.	ca. 1500	Expert
3	Interviewee 3	46, male	VP People	Food Industry	HR and culture leader with over **15 years** of experience in HR and Communications, in startups and agencies, in design and technology, and consulting and professional services firms.	ca. 2000	Expert
4	Franz Oertel	27, male	Senior Associate	Private Equity	Co-leader of BCGs university recruitment team in the UK, **3 years** of experience.	ca. 60	Expert
5	Matthias	36, male	Global	Emnify	**10-year** experience,	ca. 200	Expert

	Schmeißer		Director, Talent Acquisition		Talent Acquisition Director who partners with the business to design talent strategies for different talent segments and ensures high-quality candidate experience at the same time.		
6	Sebastian Schüller	29, male	MD and Co-Founder	HiPeople	Sebastian ran the early-stage VC Capnamic Ventures, where he invested in and supported Seed/Series A stage SaaS companies. Before he worked at Google in Dublin as a Growth Strategist**, 6 years** of experience.	ca. 50	Expert AI
7	Ulrike Dahl	50, female	MD of human resources and academy; author	Hospitality industry	**25 years** of experience as management of human resources and academy at own family business, wrote a book that was recognized as top 1 book on recruitment in Germany.	ca. 8000	Expert
8	Alexander Holtappels	53, male	Business director in the medical industry	Medical industry	**25 years** as CEO of a tech company, also works as an investor.	ca. 500	Expert

9	Ana Cristina Grohnert	56, female	Founder, Book Author	HR, Economy	Former Chief Human Resources Officer at Allianz Germany, she is one of the few female top managers in Germany with **35 years working** in the industry. As Chairwoman of the "Diversity Charter", she is committed to equal rights and a new understanding of value-creating and appreciative management.	ca. 6000	Expert
10	Steve Plesker	39, male	CMO at AOK a German health insurance	Marketing, Management	Worked in advertising for **20 years** in very high positions, later became CMO at one of Germany's largest public health insurance providers.	ca. 80	Expert
11	Gesine Schulz	39, female	Recruiter	HR	Worked as an HR professional for the past **13 years.**		Expert
12	Deniz Aydin	24, female	Junior Associate	Consulting	Experienced 4 recruitment processes, worked at PWC for **3 years**, now interns at BMW.	-	Young prof-essional

13	Max Heudorfer	25, male	Junior Associate	Law	3 internships, 1 job	-	Young prof-essional
14	Louisa Tiedge	24, female	Assistant Doctor	Medicine	4 internships, 1 job	-	Young prof-essional

2. Semi-structured interviews outline with experts

Introduction: Thank you for taking the time to participate in this interview. I highly value your input. Please note that all of your answers can be made anonymous at the end and your answers will not be published.

Questions regarding background:

1. Can you please introduce yourself and give a brief overview of your background and expertise in recruiting?

Questions regarding recruiting and diversity:

2. How many people did you recruit in your lifetime?
3. How would you describe your recruitment style?
4. How do you strive to create a diverse workforce? What specific tools do you already use?
5. How would you define bias in the context of traditional recruitment processes?
6. What biases do you encounter most often when observing the recruitment styles of others?
7. Have you ever felt like there are some biases that you carry yourself?
    a. If yes, what are those? How do you manage?
    b. If no, have you had training to become knowledgeable about structural biases?
8. Have you heard about classism and nepotism?
    a. If not, this is the definition: "Classism or class discrimination is the institutional, cultural, and individual set of practices and beliefs that assign different values to people according to their socioeconomic class; and an economic system that creates excessive inequality and causes basic human needs to go unmet".
    b. If yes or now that you heard the definition: What are your thoughts on these biases?
9. What are the key success factors for diversity hiring that you would advise others to follow?

Questions regarding AI:

10. Have you heard of AI techniques that can be applied to the recruiting process?

For Example Three cases: 1. If there are not enough applicants - AI can help market / 2. If candidates decline the offer - help with matching / 3. If there are too many - AI helps with matching, screening, engagement, onboarding

11. What do you think about the effectiveness of AI tools in finding the "right" candidate?
    a. Perhaps even who the right candidate is?
12. Have you ever worked with AI yourself?
    a. If no, would you consider implementing AI in your recruiting practices?
13. Do you think AI can replace a traditional recruiter in candidate selection?

Thank you very much for taking the time!

3. Semi-structured interviews outline young professionals

Introduction: Thank you for taking the time to participate in this interview. I highly value your input. Please note that all of your answers can be made anonymous at the end and your answers will not be published.

Questions regarding background:

1. Can you please introduce yourself and give a brief overview of your background and expertise in recruiting?

Questions regarding recruiting and diversity:

2. How many people did you recruit in your lifetime?
3. How would you describe your recruitment style?
4. How much does diversity count in your decision-making?
5. How do you strive to create a diverse workforce? What specific tools do you already use?
6. How would you define bias in the context of traditional recruitment processes?
7. What biases do you encounter most often when observing the recruitment styles of others?
8. Have you ever felt like there are some biases that you carry yourself?
    a. If yes, what are those? How do you manage?
    b. If no, have you had training to become knowledgeable about structural biases?
9. Have you heard about classism and nepotism?

a. If not, this is the definition: "Classism or class discrimination is the institutional, cultural, and individual set of practices and beliefs that assign different values to people according to their socioeconomic class; and an economic system that creates excessive inequality and causes basic human needs to go unmet".
b. If yes or now that you heard the definition: What are your thoughts on these biases?

10. What are the key success factors for diversity hiring that you would advise others to follow?

Questions regarding AI:

11. What is your general opinion on AI technologies?
12. Where do you inform yourself about new technologies? Does your company provide them?
13. Have you heard of AI techniques that can be applied to the recruiting process?
14. What do you think about the effectiveness of AI tools in finding the "right" candidate?
    a. perhaps even who the right candidate is?
15. Have you ever experienced with AI yourself?

Thank you very much for taking the time!