

Revolutionizing Dental Education: From Standardized Case Creation to AI-powered Learning with the Clinical Intelligence Platform and Atlas

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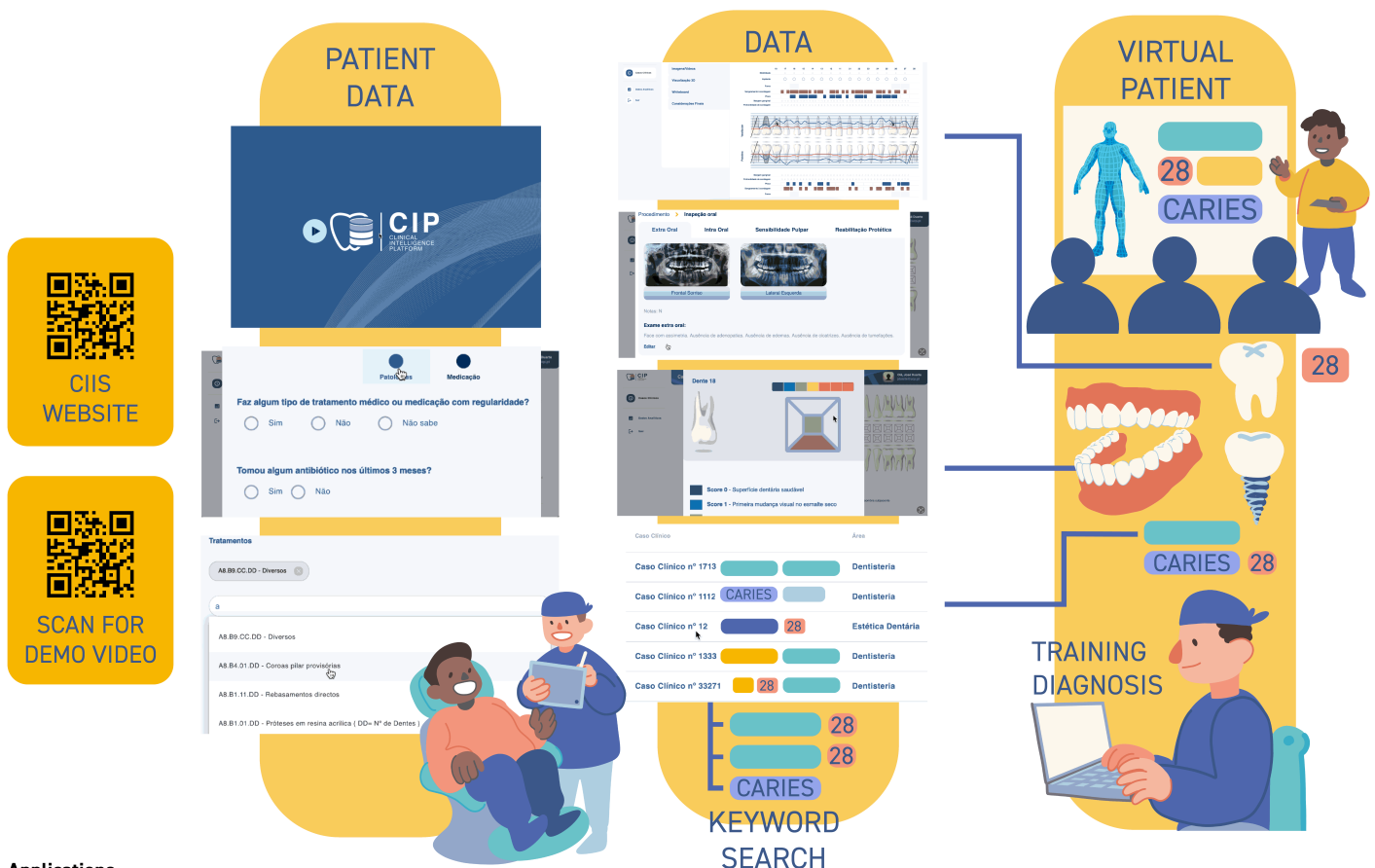
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Introduction

The Clinical Intelligence Platform (CIP) and the Atlas, represent an innovative paradigm in dental education. Currently in the developmental stage, the CIP streamlines the creation of clinical cases by enforcing a standardized and unambiguous approach. Users uniformly input fully anonymized patient data, including imagiology, anamnesis, and treatment information, through structured selection fields.

Methods

These two tools are designed in a microservices architecture, emphasizing modularity and scalability. The frontend of both tools utilizes Single Page Application (SPA) built with the Angular web framework, ensuring a responsive user interface. Connecting to the backend, an Nginx web server acts as a gateway to communicate with a .NET 7 API. This API, based on the .NET framework, manages data processing efficiently and securely. The SPA Angular frontend, and Nginx .NET 7 API backend reflects a strategic approach to tool development, promoting functional coherence and adaptability within a modern technological infrastructure



Applications

The CIP acts as a comprehensive repository for a diverse array of clinical cases, while the Atlas serves as the pedagogical tool, collectively reshaping dental education paradigms. Upon full development, the Atlas is poised to achieve several objectives, including the research of existing clinical cases for in-depth study, personalized recommendations based on user preferences, and the integration of artificial intelligence models. These models will enable the creation of hypothetical scenarios derived from real clinical cases and the simulation of the intricate clinical case creation process.

Conclusion

In summary, the Clinical Intelligence Platform and the Atlas, with their microservices architecture, cloud accessibility, and innovative features, promise to revolutionize dental education by combining standardization, advanced technology, and interactive learning experiences.