



DENT.AI

Visionnaire professionals developed a system that generates dental treatment forecasts using AI

The case study highlights the partnership between Dent.AI and Visionnaire for the development of an advanced AI solution in dentistry. Dent.AI, a Brazilian company, needed a system that could quickly generate predictions for clinical and aesthetic dental treatments, improving both professional efficiency and patient experiences.

To achieve this, they outsourced the development to Visionnaire, a company experienced in innovative software solutions.

Visionnaire's team began with system analysis, refinement, and specification, ensuring that all requirements were clearly identified and understood. Afterward, the development phase produced an AI-powered system that generates accurate dental treatment forecasts in seconds. This tool not only enhanced productivity for dental professionals but also provided patients with realistic treatment expectations, increasing their confidence.

By outsourcing IT tasks to Visionnaire, Dent.AI could focus on its core business while benefiting from specialized *expertise*.

Visionnaire's use of agile methodologies, including Scrum and weekly Sprints, as well as cloud-based operations, helped reduce costs and increase productivity.

For this specific project, the Diffusers package was used to manipulate the models to generate new images. StableDiffusion, a deep learning model for text-to-image transformation, was also used. The Kohya SS User Interface (UI) was used to train the models based on a dataset of images. We also used the LoRa technique to efficiently adjust large language models for new tasks. The mask generation was handled by the YOLOv8 technology, while the OpenCV library was used to adjust the teeth colors, based on the Vita scale.

The collaboration between Dent.AI and Visionnaire demonstrates how outsourcing specialized IT services can lead to successful, cost-efficient innovations. The project delivered an innovative solution that enhanced both business operations and patient care, solidifying Visionnaire's expertise in developing complex AI systems for niche markets like dentistry.