

SYNOPSIS OF THE PROJECT

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Shared folder/git Repository details	https://github.com/Miranta23/Main-Project.git
Project Title	Dental Problem Detection and Classification using Deep Learning and Image Processing Techniques
DESCRIPTION OF THE PROJECT: My Project propose a novel approach of automatic teeth detection and dental problem classification using panoramic X-Ray images which can aid the medical staff in making decisions regarding the correct diagnosis. For this endeavor panoramic radiographies were collected from three dental clinics and annotated, highlighting 14 different dental issues that can appear. A CNN was trained using the annotated data for obtaining semantic segmentation information. Next, multiple image processing operations were performed for segmenting and refining the bounding boxes corresponding to the teeth detections. Finally, each tooth instance was labeled and the problem affecting it was identified using a histogram-based majority voting within the detected region of interest. The implemented solution was evaluated with respect to several metrics like intersection over union for the semantic segmentation and accuracy, precision, recall and F1-score for the generated bounding box detections.	
Frontend and Backend Tools	HTML & CSS for UI Python for Machine Learning

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