HEALTHY SMILE WITHOUT GUM DISEASES (DENTOL)

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ABSTRACT

The oral disorders that affect adults the most are gingivitis and periodontal disease. Gingivititis is the medical term for inflammation of the gingiva (gums). The alveolar bone, periodontal ligament, cementum, and gum tissues that support teeth are all impacted by periodontitis. Periodontal diseases include gingivitis and periodontitis, which are distinguished by their severity and the germs that cause them. Users cannot independently monitor gingivitis. For even the least issue, they must see a doctor. However, most people likewise refrain from doing it. They only go to the doctor if the pain is unbearable. The gingivitis of the patient thereafter got worse. Treatment might not even be able to save the tooth. As a result, the tooth is more likely to go loose. Since the patient is unable to monitor their mouths on their own, they are unable to determine whether their gingivitis is becoming better or worse. If so, it's crucial to use any accessible treatments.

This research aims to design, develop, and evaluate a system that can aid in the prevention of periodontitis and gingivitis. To further elucidate on the goal of this research project, a system to predict periodontitis and gingivitis level using photographs will be created. Level of gingivititis can be predicted by this software. This app offered recommendations for remedies if individuals have gingivitis. Additionally, users of this software can perform their routine checkups. Then, gingivitis and periodontitis can be avoided.

The research's output was a trained machine learning classification model that was used to determine the level of gingivititis, with a f1 score of 0.88 for teeth detection.

Keywords