

DentIN – Household Device for routine self-dental Check-Up for Plaque, Tartar and Cavity

Abstract- Maintaining good oral health is extremely important in our lives. With good oral health, we can prevent the formation of plaque, tartar, dental cavities, and periodontal diseases on our teeth. In our busy lifestyle, we often neglect dental check-ups because we cannot find time in our schedule to visit dental check-up facilities. Bad oral health can potentially lead to life threatening diseases, such as sepsis.

Worldwide, billions of people face oral health diseases. DENTIN provides an inexpensive, efficient, and portable solution to these problems. DENTIN uses a raspberry pi camera to analyse our oral health by detecting plaque, tartar, and cavities in our mouth. DENTIN does this by using image processing and machine learning, through python. The DENTIN system has been trained with thousands of images of different severities of plaque, tartar, and cavities. The DENTIN screen shows you a live feed of the teeth and after analysing your mouth, it creates a Tooth Health Report which consists information about the severity of plaque, tartar, and cavities in your mouth. The DENTIN GUI assists you in deciding the type of treatment through online consultancy with your dentist.