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# **Using image processing for accurate diagnosis and early tooth decay and abnormalities Setareh gholizadeh faleki**

satareh gholizadeh flaki\*,

**Machine vision of science in computer science is history. Some of the main applications process images that were used in the past two decades but were a subset of processing of biometric and biomedical images. identify offenders and applications and conditions. One of the important areas of dentistry. This is especially important in the dental image processing. Dental imaging to detect and scrutiny of the internal structures of the teeth is performed for the diagnosis and treatment of oral and dental anomalies. Medical science today needs a clinical diagnosis of tooth decay is automatic. This process involves feature extraction, collection and analysis of visual information is useful. Today, tooth decay and dental lesions is one of the most common diseases throughout the world that a high percentage of the world's population is affected. According to assumptions, to design and implement an efficient algorithm for accurate diagnosis of dental caries in bitewing x-ray images using image processing. Which uses it to more quickly and accurately detect tooth decay over the area. The first stage pre-processed data. In the pre-processing of median filter to remove noise and adjusting the histogram is used to improve the quality x-ray images. After that, the proposed algorithm for separating teeth bitewing radiographs first storage mapping technique vertical position calculated dividing lines between the teeth and the teeth are segmented in such a way that only one tooth is placed between any two adjacent dividing lines. Which uses it to more quickly and accurately detect tooth decay over the area. To check whether or not corroded teeth two conditions are taken into account. Tooth decay in low density areas when shooting so much of the emitted X-rays to pass through them. This leads to decayed areas in dark image areas appear radiographically. So we can conclude that the total intensity of the pixels in rotten teeth is low. On the other hand dental caries, changes**

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in the intensity of each pixel is high. The results show the proposed algorithm is relative accuracy.

**Keywords :** Keywords: Face recognition, skin color, Gabor filter, SVMclassifier.

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