

ABSTRACT

Victims of natural disasters, crime, and accidents are often found in conditions that are difficult to identify. One of the sciences that helps the process of victim identification is forensic odontology or the forensic branch of science through teeth. Age detection through teeth is very important in forensic odontology, especially if the organs needed for identification have been damaged. In these circumstances, teeth are usually the only tissue that is still relatively intact. This can occur because the teeth are coated with the enamel which is the hardest tissue in the body. Therefore, detection of age through teeth is very useful information in terms of identifying that age, so that it will make it easier for forensic experts to identify age appropriately.

Judging from the problems that occur, forensic science was developed using dental panoramic radiographs. This dental panoramic radiograph is a dental x-ray that has been used in general by dentistry to obtain a complete picture of the tooth. In this final project, the technique of identifying and classification of dental panoramic radiographs can be facilitated by using image processing. The method used is Local Binary Pattern with the classification of K-Nearest Neighbor. The results to be obtained are a Matlab based application to identify and classify.

After testing, the highest accuracy of the system was 74.32% for the 3 data classes, and 12.16% for data classes each age. In testing the results obtained by testing the parameters that can affect the system that has been made.

Keywords: *Image Processing, Forensic Odontology, Radiograph Panoramic Image, LBP, KNN.*