

ABSTRACT

Teeth are the hard parts in the mouth. The teeth have a varied structures that allow them to do many tasks. Dental abnormalities that are often found among societies is granuloma of the teeth. A detection of illnesses that occur on the teeth can be done manually and by the help of technologies. In fact, a doctor can detect disease in human's teeth through the results of x-rays, but due to the limitations of different visions of each doctor, so it might be given different result of interpretations in reading x-rays or radiograph periapical.

This final project develop an application that can detect granuloma using method of GLCM (Gray Level Co-occurrence Matrix) which is tabulated by how often different combination of pixel brightness values (gray levels) occur in the image and based on statistical. The process of classification uses LVQ (Learning Vector Quantization). The classification aims to classify the image into two conditions, namely: granuloma and non granuloma.

The highest result of this research is 90 % of accuracy rate with classification is divided into two types, namely the image of granuloma and non granuloma uses radiograph periapical result as a test image and the image of the trainer.

Keywords: *periapical radiographs, periapical radiograph image of granuloma, Gray Level Co-occurrence Matrix (GLCM), Learning Vector Quantization (LVQ).*