

ABSTRACT

Indonesia is in an area prone to natural disasters, such as earthquakes, volcanic eruptions or tsunamis. In addition to natural disasters, other disasters can also occur such as mass accidents. The high level of disasters in Indonesia can cause many victims, the next thing to do is to identify the victims. Identifying someone in a disaster victim is still difficult to do, especially if the victim cannot be identified from the physical body such as a damaged body, burnt and undergoes advanced decay which is difficult to identify and cannot be identified through methods conventional or fingerprint.

Another method that can be used is identification of teeth, because as is known, teeth are hard parts of the body and are resistant to conditions that are indicated to destroy. Teeth are also a distinctive part of the human body, so every human being will have a different arrangement of teeth. With a dental examination, a forensic expert can find out the age of the victim. This research was carried out by processing dental panoramic X-ray images that had been scanning first and then carried out basic preprocessing to find the area to be studied. Then extracted by the Gray Level Co-occurrence Matrix (GLCM) and produce characteristics that will later be classified using Learning Vector Quantization (LVQ)

The results of this study the system can identify human age based on the pulp of the right lower mandibular first molar. The training data used in this Final Project are 106 imagery and test data 97 images, the accuracy value is 68.04% with a computation time of 0.1596 for classy testing and an accuracy value of 12,37% for testing of two ages using the quantization level = 8, angle = 0°, distance = 1 pixel, using contrast parameters for the extraction parameters of the Gray Level Co-occurrence Matrix (GLCM) feature and hidden layer = 100, and epoch = 1000 for the Learning Vector Quantization (LVQ) classification.

Keyword : *Teeth, Gray Level Co-occurrence Matrix, Learning Vector Quantization, and Odontology Forensic*