

## ABSTRACT

*The fossil is the remains of a living creature to stone due to the Earth's skin-covered or traces left behind so that it can be observed by scientists. One of the common fossils we know is bone and tooth. Teeth is one of the Hardest part on human body so it is not easily destroyed. One of the most outside and hardest part of the tooth is the enamel, although the enamel is the hardest part, the enamel is on the outer portion of the tooth causing it to be easily eroded. With the enamel eroded the tooth has a pattern of wear and tear that varies, according to the age and food in the consumption. Therefore, the pattern of tooth wear becomes the most easily observed in order to identify the age of death of a fossil.*

*To facilitate the identification of dental fossil, in this final project an image processing application made based on MATLAB which will analyze the image on human molar teeth through feature extraction then will be done identification and classification to easily observed. The method of feature extraction used is Gray Level Co-occurrence Method (GLCM). And for classification used SupportVector Machine (SVM) method.*

*The results obtained from this final project is a MATLAB-based application that can process images on human graham fossil to identify fossils with a degree of accuracy 96,92% with fixed parameters there are distance 1, kernel option 9, use type of kernel is polynomial for identification range of death fosil and got the accuracy type of molar is 73,08% with fixed parameters there are distance 1, kernel option 9, use type of kernel is polynomial so later can be implemented to facilitate research in the field of forensic anthropology and geology.*

**Keywords:** *Tooth molars fossil, Gray Level Co-occurrence Matrix (GLCM), Support Vector Machine (SVM).*