

## ABSTRACT

*In the last few decades, there have been many phenomena of natural disasters and accidents in transportation, whether air, land, or sea transportation. This is due to the fickle weather and human error. The intensity of the phenomenon often cause many victims. In general, the victims are found to have damaged bodies, thus causing difficulties in identifying the victim's identity.*

*Identification process is important to know the identity of the victim. With the advancement of science in the field of Forensic Odontology, victims whose physical bodies have been damaged become easier to identify. Teeth can be a means of identification because teeth are always protected, physically hard, resistant to temperature changes or chemical reactions. In addition, human teeth in general have different characteristics.*

*In this Final Project referring to previous research using Adaptive Region Growing, as well as the classification technique of Decision Tree with capital of panoramic X-ray. By adding the Image Registration method in the pre-processing stage it can improve accuracy. Image Registration used are resize, rotate, and cropping.*

*From the results of the tests carried out, it obtained accuracy of 48.94 % with image registration and 42.56% for non image registration. For using 2 years each class produces an accuracy 6.38%. Parameters that affect the system are resize size, statistical characteristics, class division, threshold, and K-Split.*

***Keywords: Forensic Odontology, Dental, Panoramic Rongent, Image Processing, Image Registration, Adaptive Region Growing, Decision Tree.***