ABSTRACT

The individual recognition become an important part in many aspects of modern life to get information or identity. In cases of natural disasters identification, sometimes the victim found in the not good condition, where the foot of the victims are still intact. This caused the victim identified be difficult. So, solution needed to identify individuals in unusual way through the system properly. Footprint biometric with the classification of K-Nearest Neighbor (K-NN) can be used for recognizing individual accurately. Footprint biometric meet the requirements elections they are universal, distinguish, and permanent, where the value of K from classification will be adjusted to produce the best accuracy.

In the previous research there were various kinds of recognation biometric, where each system biometric having the advantages and disadvantage. One of the advantages of footprint biometric is on good performancy. This final project was made with the aim to simulate a system that could identify individuals through the image of footprint.

The results of K-NN classification are: Euclidean Distance, and Cosine Distance produce accuracy 98% with autorotate system. The average computation time for each image to process the feature with Haar Wavelet extraction is 2.9796 seconds and 0.00229 seconds for classification process.

Keywords : Biometric, Footprint, Haar Wavelet, K-Nearest Neighbor (KNN).