

ABSTRACT

Signatures are widely used as an identification system to identify people. In this final project, the author tried to make application to help identify people signature. The method used here are Neural Network Algorithm.

There are two kind of Neural Network used in this final project, they are Back-propagation Neural Network and Self Organizing Map Neural Network. RGB (Red Green Blue) image results acquisition has been converted to grayscale image, and it is need to be repaired before being processed. The pre processing, consist of converting to binary image inverting, and cropping processed. After pre processing and get better quality image, the next step is to conduct feature extraction. At this step, the image divided into M rows and N column. Each square pixel imaging performed with the matrix model, this is do to get the intensity of occurrence of each model. After the objects have successfully simplified, the next step is the identification by using *Back-propagation* Artificial Neural Network and *Self Organizing Map* (SOM) Artificial Neural Network.

The result of identification is system can recognize the owner signature, as well as getting best architecture and parameter of neural network by due regard the parameters already determined. Accuracy in the signature can be in recognition using Artificial Neural Network Back-Propagation is 81.78%, with a Neural Network Self Organizing Map is 71.83%.

Keywords: signature image identification, Back-propagation neural network, Self Organizing Map neural network.