ABSTRACT

As a nation with a large amount of blind people, Indonesia has provided blind code on money to ease blind people in identifying the nominal of the money. But in reality, it is hard enough for blind people to access blind code if the money is not in a proper condition.

This application is desired to be an alternative option for blind people to identify the nominal of money. This application is designed according to digital image processing concept using Matlab, and then converted to .exe file format.

The classification method used to identify the nominal of the money is Learning Vector Quantization Artificial Neural Network.

According to the testing result, the highest training accuration is 100% and the average of testing accuration for all nominals is 89.39%. This accuration is achieved by building a network architecture consists of an input layer, a hidden layer, and an output layer. The most optimize parameters for network architecture in this final project are using 50 epoch, learning rate 0.09 and 32 node hidden layer. The average computational time of testing is 0.151 seconds.

Keywords: Learning Vector Quantization, image processing, ANN