

Abstract

In this final project, it's made a systems which is combined Linear Discriminant Analysis (LDA) as a method for extracting features and Learning Vector Quantization (LVQ) Neural Network as a method to classify the character block number on the electric meter. Numeric characters that will be classified is the character numbers 0 to 9. By using this method, the system is able to recognize 200 training data with an accuracy of 94.5% and validation data with an accuracy of up to 98%.

LDA method has the ability to reduce the dimensions of the data while still maintaining the characteristics of information and data. While LVQ Neural Networks is a network with supervised learning. Advantage of LVQ is a linear layer, so have a quick learning ability. LDA feature extraction process is done using 200 training images. The training process using 200 training data, while for validation using 50 image validation. From the test results in this thesis, the best parameters of LDA and LVQ that is: by using a PC 99, 200 epoch, learning rate 0.05 and 100 hidden neurons.

Key words : numbers classification, feature extraction, Linear Discriminant Analysis (LDA), learning, Learning Vector Quantization (LVQ)