

Abstract

In a parking sistem, number plate recording is one of important things. Besides being used to secure the parking sistem, number plate recording is able to help count on the parking charge. Number plate is a unique identity of a vehicle which consists of numbers and letters. Each vehicle has its own number plate different one to another.

In this final project, it's made a sistem which is able to recognize number plate. Using Principal Component Analysis (PCA) as a method in the feature extraction and Learning Vector Quantization (LVQ) Neural Network as a method in the classification, this sistem is able to recognize 60 plates of testing set with accuracy 93.333%. PCA can reduce data, but still keep the characteristic, thus the input for the classification can be reduced but still produce the good accuracy. Meanwhile, LVQ is one of neural network which works supervisedly in competitive layer. Since LVQ has a linear layer, in classification process this method has the ability to learn fast along with high accuracy. The best parameters of PCA and LVQ are 150 PCs, 2000 epochs, 0.0075 learning rate, 34 hidden layers

Kata Kunci : Number plate, Principal Component Analysis, Learning Vector Quantization.