ABSTRACT

Various methods have been developed to achieve a high level of accuracy and to create a reliable face recognition system. Among the most famous are the Principle Component Analysis (PCA). Although PCA projections are optimal for dimensional reduction, PCA is less optimal in class separation. Therefore, PCA can be combined with other methods that are better in class separation. One example is the method of Artificial Neural Networks (ANN).

In this final project, build a face recognition system using the Principal Component Analysis (PCA) method for extraction and utilize the method of Artificial Neural Networks (ANN) as a classification. The system built will be able to recognize the identity of the input face based on the previously stored database. The output of this system is an Android-based application..

From the results of the study, it was concluded that the most ideal parameters for this study used a threshold value of 0.3, the number of layer 5 hidden, and the traincgp training function method by producing the best level of accuracy and computation time. Based on these parameters the greatest accuracy is obtained 94% with the computation time needed is 0, 47292 seconds.

Keywords : Face recognition, PCA, Neural Network, Android