

## **ABSTRACT**

Nowadays, Computer Vision is being a greatly developed research. The main idea of Computer Vision is how to make the machine be able to recognize an object. One of the Computer Vision's applications that rapidly developed is face recognition system. So far, kinds of problem that faced in developing a face recognition system are about pose variance, face orientation, lighting and computational problems when the recognizing procedure is running.

In this paper, face recognition system try to be constructed. The system will be able to recognize the identity of face based on the database that had been trained before. The result of this research shows that the highest accuracy of the system is 85.45 %. Images that are used for testing are face images which are do not contained in the training set. They consist of 120 images of people whose face already trained before and another 100 images of people whose face are outside the database.

Principal Component Analysis (PCA) is used as feature extractor to reduce the image dimension so that the processing time goes faster. Final process of this recognizing system is classifying that use a radial basis function network method.