# ABSTRACT

Gait based recognition's features has advantages to be a recognition system, because it is not easy to imitate and modified. In the case of gait has unique feature, because it has unique style from each individual. Another advantage of gait biometrics can work over long distances. Recognition individuals via *webcam* with input in the form of video can be an alternative to the recognition biometric individuals other than the recognition biometric methods such as fingerprint and iris.

This final task is try to implement a data reduction method using singular value decomposition (SVD) and artificial neural network (ANN) back propagation for classification methods in the recognition individuals based on gait. SVD is used to decompose the gait characteristics produced with the aim of reducing the amount of data characteristics and take only the importance of these traits. The process will then be carried out classification using back propagation neural network. By looking for the combination of back propagation best parameters on the value of the epoch, learning rate, the number of hidden layer neurons, and mean square error rate (MSE) target by doing trial and error to find the optimal value of the percentage of accuracy in testing individual recognition.

The output of this system is accuracy in recognizing an object walk. The accuracy of this system will be judged by the percentage of accuracy of recognizing individuals walking. Singular value decomposition with back propagation neural network has the characteristics of a pretty good introduction to the case of an individual based gait recognition because it proved able to deliver a 90% accuracy rate. This accuracy is achieved in training back propagation neural network with parameters of hidden layer neuron number 10, with the epoch 1000, target MSE 1e-20, and the learning rate parameter 0.01.

Keywords: ***Gait, SVD, Back propagation Neural Network.***