

ABSTRACT

Biometric is the way how to know someone that he or she have. Now a days, biometric have been implemented for system which need a high security like bank, government building, electronic device and many others. One of the most popular biometric is finger print. Finger print is unique and consistent during live time. Moreover, finger print is easy to collect. But the structure of fingerprint is very complex so it makes finger print is difficult to compare manually. So, it needs a system to recognize fast and accurately.

In this final project, the method which is used to recognize finger print is multiscale fourier descriptor feature extraction and wavelet transform. Multiscale fourier descriptor is the combining of Wavelet transform and fourier transform respectively. By using wavelet transform we can produce image in multiscale representation and coefficient which is produced by Fourier transform is invariant to rotation, scalling and translation. Whereas back propagation neural networks as a classifier. Data set used for training and testing is 125 respectively which is contain of 25 classes.

Level of accuracy by using multiscale fourier descriptor is 30.4% for testing set. While by using wavelet transform, level of accuracy is 84 % for testing set.

Key word : biometric, finger print, multiscale fourier descriptor, wavelet transform