ABSTRACT

Iris is the annular region of the eye bounded by the pupil and the sclera (the white part of the eye). Visual texture of the iris is formed during fetal development and stabilize itself during the first two years of the life of the fetus. Complex iris texture brings a very unique and useful informaItion for a personal recognition. The speed and accuracy of the Iris-based recognition system is very promising and it is possible to use on a large scale identification systems. Each iris is unique and like fingerprints, iris texture is different from identical twins. The texture of the iris is very difficult to surgically destroyed.

In this final project built a system capable of recognizing the iris in the form of a digital image. Digital image on a digital camera can do detection using Local Binary Pattern (LBP), and then classified using a neural network Self Organizing Maps (SOM).

In this final project has created an application that can identify a person through iris patterns. Used as a method of local binary pattern feature extraction and ANN-SOM for pattern recognition of iris images. Eye image is processed data from the Chinese Academy of Sciences-Institute of Automation (CASIA). By using the optimum parameters, the system is able to produce a pretty good performance because it can produce maximum accuracy value of 95% and the average computation time for 0.01379 seconds on each image slice.

Keywords : Iris, ANN,SOM, Local Binary Pattern, CASIA.