ABSTRACT

Biometric represent an approach which can be used to identify and also verificate to someone identity based on human physical characteristic and also personal traits [WOO2003]. Approach of this biometric can be conducted to physical characteristic found on eye iris, eye retina, face, fingerprint etc

In this final task, author try to implement an application applying approach of biometric system to recognize or identify the human being face. Method of biometric approach used to implement human face recognition application is Support Vector Machine method.

Application constructed based on the concept of component-based approache where the image segmentation, feature extraction and classification are three process which used to identify face images.

Testing of constructed application conducted using 92x112 pixel 400 greyscale digital image datas from Olivetti Research Laboratory. Using SVM approache that polynomial kernel on it, testing show the identification accuracy is 87%

It can be concluded that segmentation process which are as preprocessing process influence the acuracy where the result of segmentation process are used for doing face feature extraction. Slipping suitable kernel function are concerned for the classification process where the classification are the main process to identify face image.

Key word : identification, verification, physical characteristic, human face recognition,component-based, support vector machine.