ABTRACT

In this modern era, technology of image processing has been developed to help human solve many problem. A face of human can be used in image processing as a security key because every human face have a unique characteristic, although there are some aspect that can be a same match. One of the purpose in image processing is that there is a way to detect specific object.

This final project is implement live face detection based on image processing on a prototype of smart-door system. Physiological live face detection will recognize between a live face and photo based on face reflect movement of eyes and mouth. Methods of face detection using Histogram Oriented Gradient and Haar-Cascade, motion detection of face reflect movement using Support Vector Machine.

The result of this final project smart-door system with live face detection using physiological motion that we can conclude, the avarage accuracy for live face detection is 93,5 % and fake photo 90,7% based on reflect movement of eyes and mouth.

Keywords : image processing, face detection, histogram oriented gradient, haar-cascade, physiological motion.