ABSTRACT

POINTER MOUSE CONTROLLER SOFTWARE USING FACE AND EYE

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The software was built in this thesis was a pointer controller using facial movements and eye blinking. This software is one of the application in the field of image processing and Computer Vision. The user simply moves his face to control the pointer and blinks to click. The software is aimed at people with disabilities benefit physically, especially defects in the hand.

Pointer controller software was built using C# programming language, and using Fisherface (FLDA) method. This method was developed by Robert Fisher. This method uses a matrix of scatter. Scatter matrix compared to obtain the maximum and minimum values of each object.

Based on the results of whitebox testing ,the cyclomatic complexity values are equal, meaning that the test was successful and based on the Blackbox testing can be concluded that the average level of accuracy of this application is for 82% to pointer movement and about 76% for the clicks on the pointer. User optimal distance from the camera to the object detection was about 30 cm to maintain stability in the software detection.

Keywords : *Fisherface ,FLDA, OpenCVSharp , face* , eye