Human-Eye Controlled Virtual Mouse

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PROBLEM STATEMENT

Eye tracking technology has become one of the most popular techniques within the human computer interaction (HCI). This is very important for the people who have difficulty with speech and movement disabilities, especially for the paralyzed and amputees person. This measure will be the most useful for the person who is without hands through which they can operate with the help of their eye and facial movements .

APPROACH

The five approach of this project is:

-The first step is we just open a video or web-camera and see ourselves on our computer.

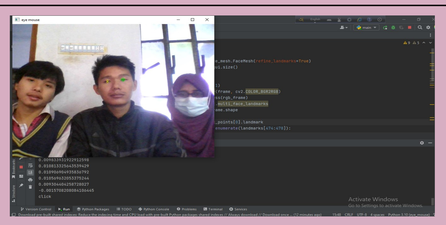
-In step two we will detect the face.

-In step three we will tell the face that the face has been captured and tell him that the landmarks have -been captured.

-In step four we will detect the single eye and control the mouse.

-The work of the final step is to tap and click with the eyes.

RESULTS



Real-time eye blinking ratio

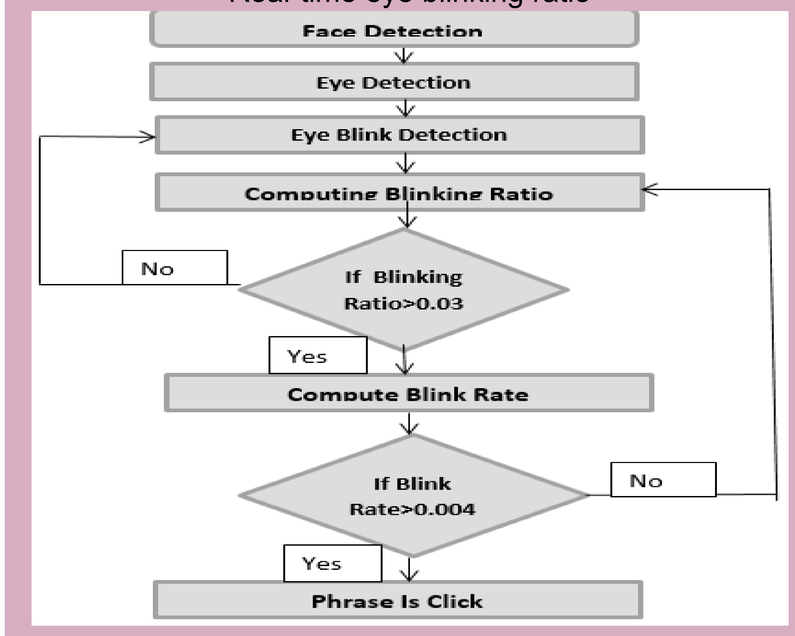
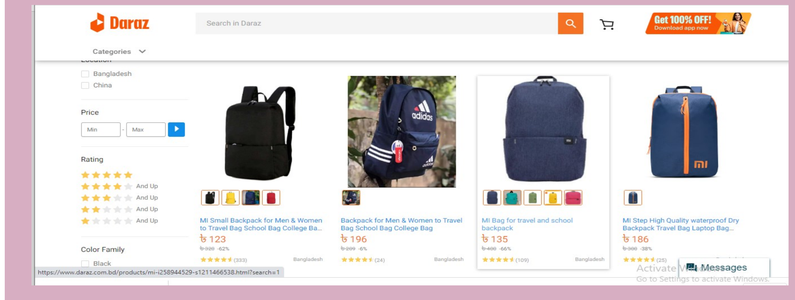


Figure: THE WORK FLOW OF THE SYSTEM ARCHITECTURE.



Virtual Browsing

FUTURE WORK

Our system is not 100% accurate though clicking the phrases with eye blinks are more accurate. For example, if the face goes outside the specific camera in this system, the virtual mouse does not work anymore. So we have to work in detail to solve this problem in futuure.

CONCLUSION

A system that enables a disabled person to interact with the computer was successfully developed and tested .The eye movement detection and tracking have also potential use in gaming and virtual Reality.

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