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Department of CSE(AI&ML)
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Mini Project (21AIMP67) – Review 1 Presentation

EYE-CONTROLLED MOUSE CURSOR

PROJECT TEAM:

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ABSTRACT

The eye gaze system is a communication system for people with complex physical disabilities.This operates with eyes by looking at control keys displayed on a screen.With this system a person can synthesize speech,control his environment,operate a telephone,run computer software,operate a computer mouse,and access the internet and e-mail.

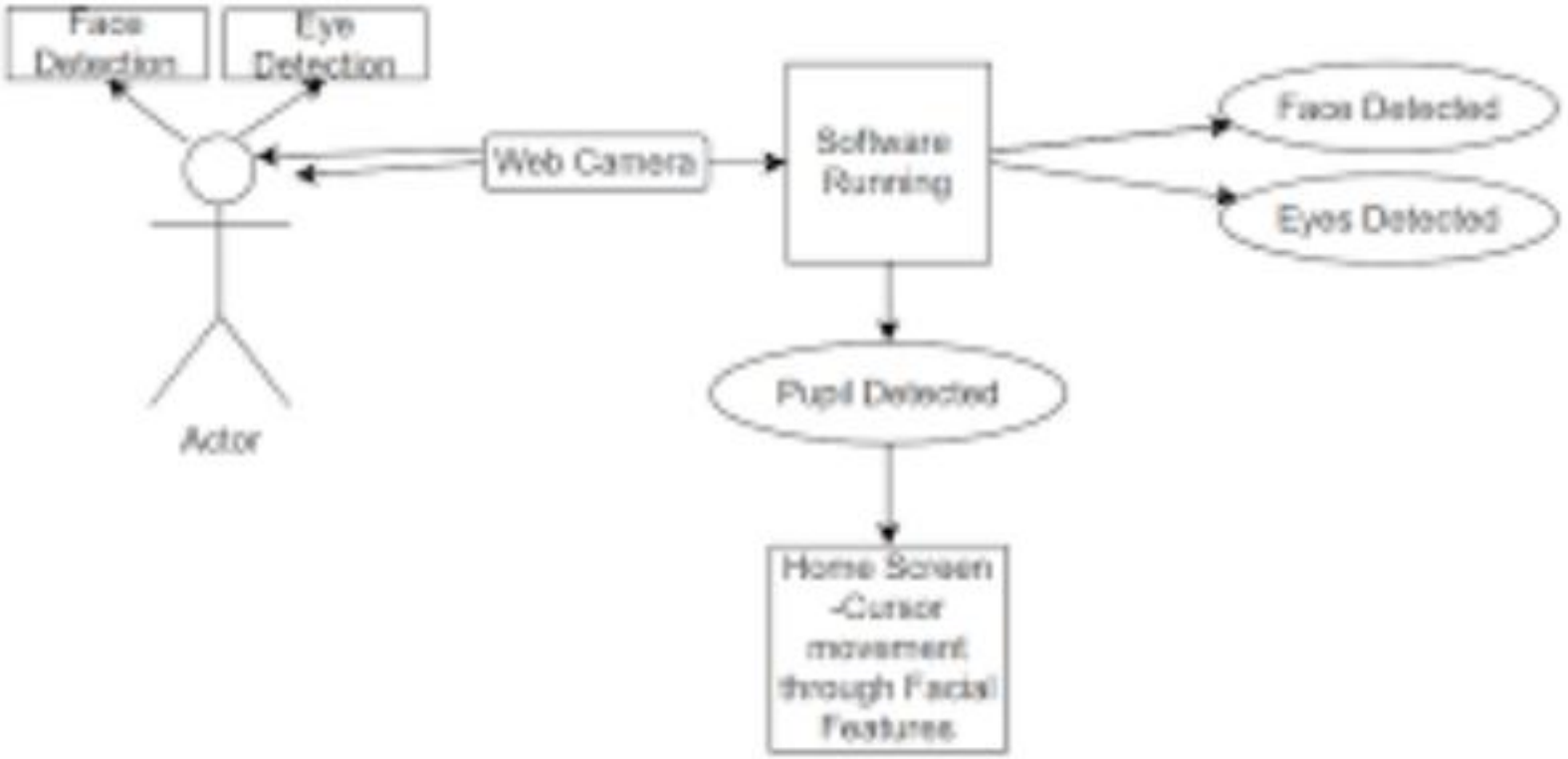
PROBLEM STATEMENT

Develop an accurate eye-control mouse systems for physically disabled persons and people with motor impairments often rely on assistive devices for basic computer interactions.

OBJECTIVES

- To offer people with extreme disabilities,an opportunity to control a computer simply by moving his eyes or head.
- Contribute to the field of human-computer interaction and assistive technology by conducting research on eye tracking algorithms.
- Raise awareness and educate stakeholders about the capabilities and benefits of eye-controlled interfaces.
- Create a seamless and intuitive user experience by designing an eye-controlled mouse that is easy to calibrate, accurate in detecting eye movements, and responsive in translating these movements into computer commands.

BLOCK DIAGRAM



SYSTEM REQUIREMENTS

Software Requirements

- Python (version 3.6 or higher)
- HTML
- Operating System: Windows 11

Hardware Requirements

- Processor: 12th Gen Intel(R) Core(TM) i5-1240P (1.70 GHz)
- System Type: 64-bit operating system, x64-based processor

TOOLS USED FOR DEVELOPMENT

- **OpenCV**: Open-source computer vision and machine learning software library.
- **MediaPipe**: is an open-source framework for building pipelines to perform computer vision inference over arbitrary sensory data such as video or audio.
- **PyAutoGUI**: is a Python automation library used to click, drag, scroll, move.

OUTCOMES

- Demonstrate how the eye-controlled mouse enhances accessibility for individuals with disabilities, such as those with limited mobility or motor skills.
- potential applications beyond the current scope of the project. Explore opportunities for commercialization, integration with other technologies, or further research and development to expand the impact of eye-controlled interfaces.

CONCLUSION & FUTURE SCOPE

Eye Mouse is a very helpful tool which can replace a normal mouse device.Its simple,multipurpose and helpful in virtual or interactive computer gaming and advertisement.This could include improvements in eye-tracking accuracy, responsiveness of the interface, or integration with other assistive technologies.Outline potential future directions for enhancements or new features based on this feedback.Discuss feedback received from users or testers regarding the functionality and usability of the eye-controlled mouse.

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