

One Page Report on: AI virtual Mouse

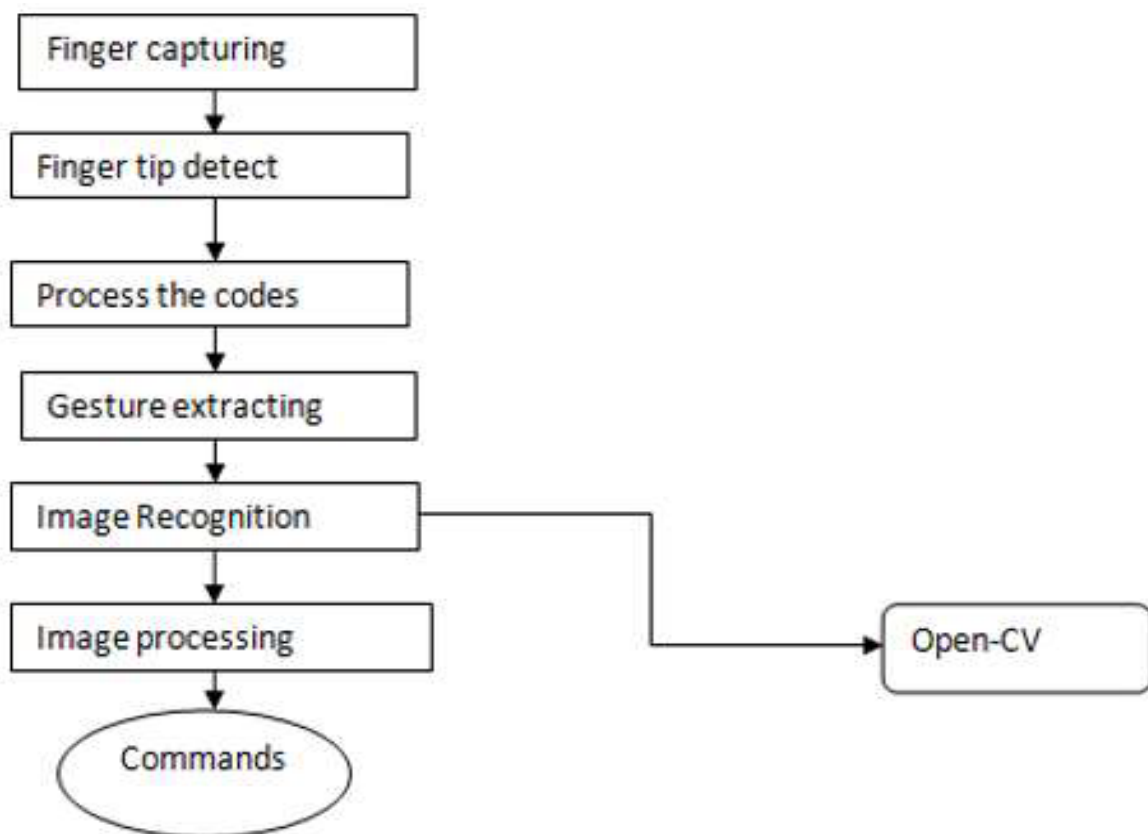
Developed by [1. Mr. Pranav Kathar(AI3060), 2. Mr. Pathan Mohd Aaqeb(AI3071)]

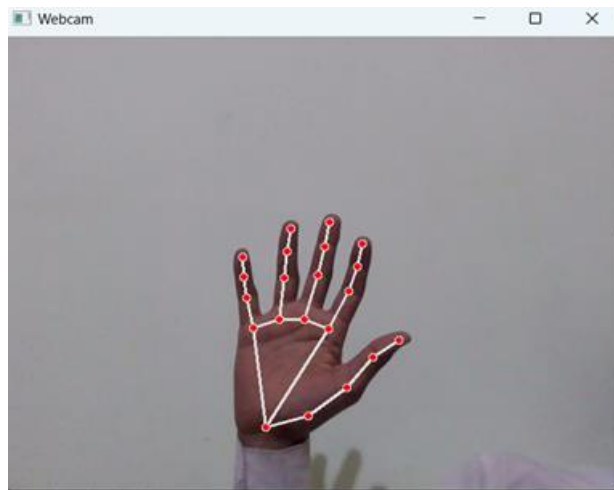
Abstract:

This project promotes an approach for the human computer interaction HCL. Where we use real time camera for controlling the mouse function. Our proposed project is on hand gesture-based system that allows users to control desktop mouse movements using hand gesture. To detect hand gesture movements, our system makes use of a desktop webcam. The goal is to control mouse cursor functions with a simple camera or webcam rather than a traditional or standard devices. Using only a camera, the Virtual Mouse provides an infrastructure between the user and the machine. It enables the user to interact with a machine without the need for any mechanical or physical devices, and even allows to control mouse functions. The domain of the project is AI/ML.

The goal is to move the mouse pointer on the screen without using any hardware, such as a mouse, and instead by utilising finger motions, i.e. the gesture recognition process. Different technologies have been explored in the development of virtual mice in recent years. Our project's suggested technology focuses on three main areas: object identification, picture processing, and colour recognition. We demonstrate an innovative method to Human Computer Interaction in this research, in which cursor movement is controlled by a real-time camera.

Block/ Flow Diagram:



Output:**Conclusion:**

From the results of the model, we can come to a conclusion that the proposed AI virtual mouse system has performed very well and has a greater accuracy compared to the existing models and also the model overcomes most of the limitations of the existing systems. Since the proposed model has greater accuracy, the AI virtual mouse can be used for real-world applications, and also, it can be used to reduce the spread of COVID-19, since the proposed mouse system can be used virtually using hand gestures without using the traditional physical mouse.