

Project Title

Gaming with Gestures

Submitted in partial fulfillment of the requirement of the award of the degree of

Bachelor of Technology
(Computer Science and Engineering)



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Gaming with Gestures

Abstract:

Virtual environments are designed to provide natural, efficient, powerful, and flexible human-computer interaction. However, virtual worlds are not well-suited to the standard two-dimensional, keyboard-and-mouse-oriented graphical user interface. This will look at the most prevalent methods for capturing, monitoring, and recognizing many modalities at the same time in order to develop an intelligent human-computer interface for games. Given the wide range of gestures and their importance in building intuitive interfaces, the techniques under consideration concentrate on gestures, while they may be applied to other modalities as well. The methods under consideration are user-independent and do not need huge learning samples.

In this project, a model is developed that collects user gestures using a camera and uses the open-source free computer vision library OpenCV to convert real-time human motions into keyboard input for video game control.

Software requirements:

Operating Systems: Windows 10, Linux

IDE: Jupyter Notebook, Any Game Emulator

Hardware requirements:

Processor name: Core i5 10th Gen

GPU: Any Nvidia/AMD/Integrated GPU

RAM: 8 GB (DDR4)

System type: 64-bit Operating System