A Project Report on

VIRTUAL GAMING THROUGH HUMAN GESTURE DETECTION USING DEEP LEARNING

*submitted in partial fulfillment of the requirement for the award of the Degree of BACHELOR OF TECHNOLOGY*

**by**

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**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**G. PULLAIAH COLLEGE OF ENGINEERING AND TECHNOLOGY**

**(Autonomous)**

(Approved by AICTE | NAAC Accreditation with ‘A’ Grade | Accredited by NBA (ECE,CSE & EEE) |

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**CERTIFICATE**

This is to certify that the project report entitled “**VIRTUAL GAMING THROUGH HUMAN GESTURE DETECTION USING DEEP LEARNING”**  being submitted by **MOHAMMED ANAS AFFAF (18AT1A0513), A S ABDUL KALAM (18AT10A0502), MOULVI KAIF AHMED (18AT1A0557), SHEIK ASLAM BASHA (18AT1A0522)** in partial fulfillment of the requirement for the award of the degree of Bachelor of Technology in Computer Science and Engineering of G.Pullaiah College of Engineering and Technology, Kurnool is a record of bonafide work carried out by them under my guidance and supervision.

The results embodied in this project report have not been submitted to any other university or institute for the award of any Degree or Diploma.

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ABSTRACT

The 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.

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