



**VIGNANA BHARATHI**  
Institute of Technology

Counselling Code : **VBIT**



(A UGC Autonomous Institution, Approved by AICTE, Accredited by NBA & NAAC-A Grade, Affiliated to JNTUH)

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**  
**(DATA SCIENCE)**

**MAJOR PROJECT ABSTRACT**

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**Title:** Eyeball Based Cursor Movement

**Abstract:**

This study explores a fascinating approach to computer interaction by utilizing the natural movement of the eyes to control the on-screen cursor. Traditional mouse and keyboard methods may sometimes pose challenges, especially for individuals with physical limitations. The proposed eye-ball-based cursor movement system aims to provide an intuitive and accessible alternative. In this research, we delve into the technology behind eye-tracking devices and their integration into mainstream computing. By understanding how the eyes move, we can create a responsive system that allows users to effortlessly control the cursor with their gaze. The simplicity of this method opens doors to a more inclusive computing experience for everyone. The study investigates the potential applications of eyeball based cursor movement, including gaming, accessibility features, and enhanced user interfaces. Moreover, we address concerns related to privacy and user comfort, ensuring that the technology respects individual boundaries. Through this exploration, we aim to contribute to the ongoing efforts in making technology more user-friendly and accessible, ultimately fostering a more inclusive digital environment for people of all abilities.

**Keywords:**

Eye-tracking, Eye-ball-based interaction, OpenCV, Gaze control, Human-computer interaction.

Project Guide

Project Coordinator

HoD