

EYE GAZE MOUSE FOR MOTOR IMPAIRED

MINOR PROJECT REPORT

Submitted in partial fulfilment of the requirements for the award of the degree of

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE & ENGINEERING

by

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DELHI)**

DELHI – 110058

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CANDIDATE’S DECLARATION

It is hereby certified that the work which is being presented in the B. Tech Minor Project Report entitled **"EYE GAZE MOUSE FOR MOTOR IMPAIRED"** in partial fulfilment of the requirements for the award of the degree of **Bachelor of Technology** and submitted in the **Department of Computer Science & Engineering** of **MAHARAJA SURAJMAL INSTITUTE OF TECHNOLOGY, New Delhi** (Affiliated to **Guru Gobind Singh Indraprastha University, Delhi**) is an authentic record of our own work carried out during a period from **August 2019 to December 2019** under the guidance of **Ms. Sonia Rathee, Assistant Professor**.

The matter presented in the B. Tech Major Project Report has not been submitted by us for the award of any other degree of this or any other Institute.

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CERTIFICATE

This is to certify that the declaration made by the candidates is correct to the best of my knowledge. They are permitted to appear in the External Minor Project Examination

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ABSTRACT

The project outlines the development and initial testing of a hybrid computer cursor system based on Eye Gaze Tracking and electromyogram (EMG) processing for hands-free control of the computer cursor system. The goal of the system is to provide an efficient computer interaction mechanism for individuals with severe motor disabilities (or specialized operators whose hands are committed to other tasks, such as surgeons, pilots, etc.). Usage of the popular Webcams makes the system inexpensive. The eye gaze mouse enables these motor impaired patients to control the mouse of a computer by using their gaze. The program uses the head movements of the user to map the movement direction of the mouse and uses left and right winks for the respective clicks. The speed of the mouse also varies as we move away from the center anchor point. The farther we go the faster the mouse moves. A special scroll mode is also available where the user can scroll easily through a page without the need for clicking the down button on the scrollbar.