

Visvesvaraya Technological University

Belgaum-590014



A Project Report

on

“EYE CONTROLLED COMPUTER”

(Submitted under the 35th series of SPP, KSCST)

Submitted in partial fulfillment for the Award of Degree

of

BACHELOR OF ENGINEERING

IN

INFORMATION SCIENCE & ENGINEERING

Project Associates:

JMAR P JAIN

(4VV08IS025)

KUMAR S

(4VV03IS033)

H K N

(4VV08IS038)

I BABU M S

(4VV08IS027)

Under the guidance of

Mrs. KHEMA RAPHAEL

Assistant Professor

DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING

2011-2012



VIDYAVARDHAKA COLLEGE OF ENGINEERING

GOKULAM III STAGE, MYSORE-570 002

ABSTRACT

Human-Computer Interface (HCI) is one of the most promising field in artificial intelligence. HCI can be described as the point of communication between the human and a computer. HCI aims to use human features to interact with the computer. The system presented here is a vision-based system for detection of long voluntary eye blinks and interpretation of blink patterns for communication between man and machine. This system replaces the mouse with the human face as a new way to interact with the computer. Facial features (nose tip and eyes) are detected and tracked in real-time to use their actions as mouse events. The coordinates and movement of the nose tip in the live video feed are translated to become the coordinates and movement of the mouse pointer on the application. The left/right eye blinks fire left/right mouse click events. This system works with inexpensive USB cameras and runs at a frame rate of 30 frames per second. This system can be used by normal people as well as handicapped people as a new human/computer interface.