VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi – 590 018

PROJECT REPORT ON

"THIRD EYE FOR BLIND"

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

BACHELOR OF ENGINEERING
IN
ELECTRONICS & COMMUNICATION ENGINEERING

Submitted By

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2022-2023

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CERTIFICATE

Certified that the project work entitled **"THIRD EYE FOR BLIND"** *is a bona fide work carried out by*

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in partial fulfillment for the award of **BACHELOR OF ENGINEERING** in **ELECTRONICS & COMMUNICATION ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2022–2023. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies theacademic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.

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ABSTRACT

The concept of a "third eye for the blind" refers to the use of technology to provide people who are blind with a sense of vision or spatial awareness beyond their physical sight. This technology can take many forms, from sensory substitution devices that translate visual information into sound or touch, to implants that directly stimulate the brain to create visual perception. One promising approach is through the use of computer vision algorithms and wearable devices that can capture images and convert them into tactile or auditory feedback. Other approaches involve the use of electrical stimulation to directly activate the visual cortex in the brain, bypassing the need for functioning eyes.

While these technologies are still in the early stages of development, they have the potential to greatly enhance the independence and quality of life for people with visual impairments. They could enable blind individuals to navigate unfamiliar environments more confidently and safely, perform complex tasks such as reading and writing, and even experience visual art and entertainment in new ways.

To create a third eye for the blind using Arduino Uno, one would need to first select the appropriate sensors and actuators based on the specific needs of the user. Some possible sensors that could be used include ultrasonic sensors, infrared sensors, or cameras, which can be used to detect obstacles and provide distance measurements. These sensors can be connected to the Arduino Uno board using the appropriate interfaces, such as I2C or SPI, and the code can be programmed to read the sensor data and process it in real-time.

Once the sensor data has been processed, the Arduino Uno can be used to control various actuators that provide feedback to the user. This can include audio feedback, such as synthesized speech or tone generation, or haptic feedback, such as vibration motors or pressure sensors. The feedback can be designed to provide the user with information about the location and proximity of obstacles, as well as other environmental cues such as temperature or humidity.