

Third Eye for Blind Person

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Abstract: *This project, titled “Third Eye for Blind Person,” focuses on the design and development of an assistive wearable system that helps visually impaired individuals detect obstacles and navigate their surroundings safely. The system uses an Arduino-based embedded platform integrated with ultrasonic sensors to identify nearby objects and provide real-time feedback to the user.*

The working principle is based on distance measurement using ultrasonic sensors, which continuously scan the environment for obstacles. When an object is detected within a predefined range, the system alerts the user through a buzzer or vibration motor. The intensity or frequency of the alert varies depending on the distance of the obstacle, enabling the user to understand how close the object is. The system typically utilizes components such as the Arduino Uno, HC-SR04 ultrasonic sensor, and alert mechanisms like buzzers or vibration modules, forming a compact and wearable device.

The main objective of this project is to develop a low-cost, reliable, and user-friendly assistive tool that enhances mobility and independence for visually impaired individuals. Unlike traditional walking aids, this system provides additional sensory input, improving obstacle detection and spatial awareness in real time..

Keywords: Obstacle Detection, Distance Measurement

