

# **PROJECT REPORT**

**Third Eye for  
Blind**

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# ABOUT US



Student innovator focused on developing assistive technology that improves the quality of life for visually impaired individuals. Our objective is to design practical, low-cost, and reliable solutions using electronics and embedded systems.

The Third Eye for Blind Glasses project is a step toward enhancing independent mobility for visually challenged people by helping them detect obstacles in real time.

This project combines basic electronics with microcontroller technology to create a wearable safety device that is simple, efficient, and easy to use in daily life.

## WHAT WE DO

### Our Vision

Our vision is to empower visually impaired individuals with affordable and smart assistive devices that promote independence and safety. We aim to use technology to bridge the gap between disability and accessibility in everyday environments.

### Our Mission

Our mission is to design and develop a wearable obstacle-detection system that alerts blind users about nearby objects using sound signals. The project focuses on accuracy, reliability, and ease of use while keeping the cost minimal.



# OUR RESEARCH



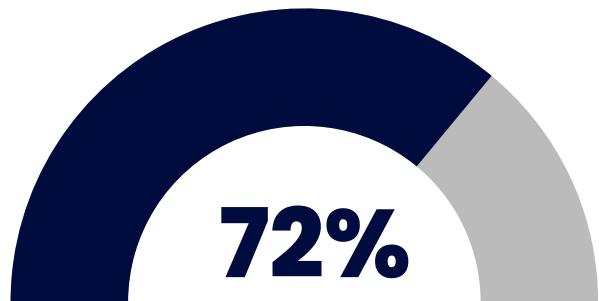
We conducted research on existing assistive devices such as walking sticks, smart canes, and camera-based systems. Many of these solutions are either expensive or complex to use.

Based on this analysis, ultrasonic sensing was selected due to its accuracy in distance measurement and low power consumption.

The project uses an ultrasonic sensor mounted on glasses to detect obstacles in front of the user and provides instant audio feedback through a buzzer.

## Success Presentation

The prototype successfully detects obstacles within a fixed range and alerts the user before collision. Testing showed consistent performance in indoor and outdoor environments with minimal error.



## Overview

The Third Eye for Blind Glasses is a wearable assistive device designed to help visually impaired individuals navigate safely. An ultrasonic sensor continuously measures the distance between the user and nearby obstacles. When an object is detected within a predefined range, the system triggers a buzzer to warn the user.

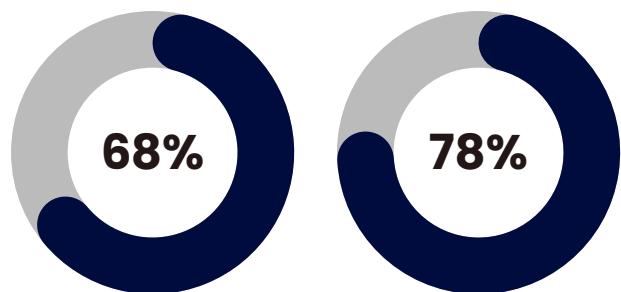
### Key Components:

- Arduino (Microcontroller)
- Ultrasonic Sensor
- Buzzer
- Power Supply
- Connecting Wires
- Glass Frame

## Our Market

### Effectiveness

Traditional White Cane    Third Eye for Blind Glasses



The Third Eye for Blind Glasses demonstrates higher effectiveness than the traditional white cane by detecting obstacles at multiple heights and providing timely audio alerts, improving user safety and navigation.



# STATISTICS

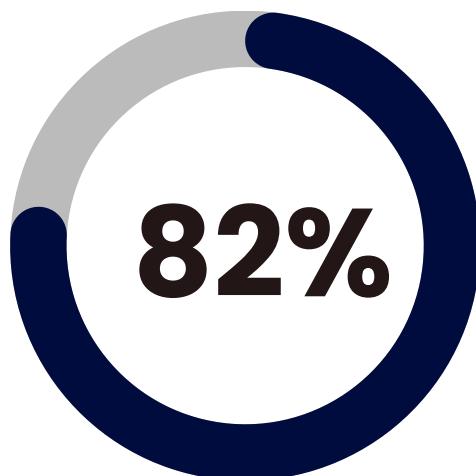
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The project was evaluated based on accuracy, response time, ease of use, and reliability. Multiple tests were conducted in different environments to analyze performance.

## Project Results

The system demonstrated fast response time and reliable obstacle detection within the tested range. The buzzer alert system proved effective in notifying the user without causing confusion.



## Comparative Performance Analysis

