Motion detector support The Visually Impaired Person.

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Introduction.

- This project is an innovation which helps the blinds people to navigate with speed and confidence by detecting the nearby obstacles using the help of ultrasonic waves and notify them with buzzer sound or vibration. They only need to wear this device as a glove . This is a fully automated device.

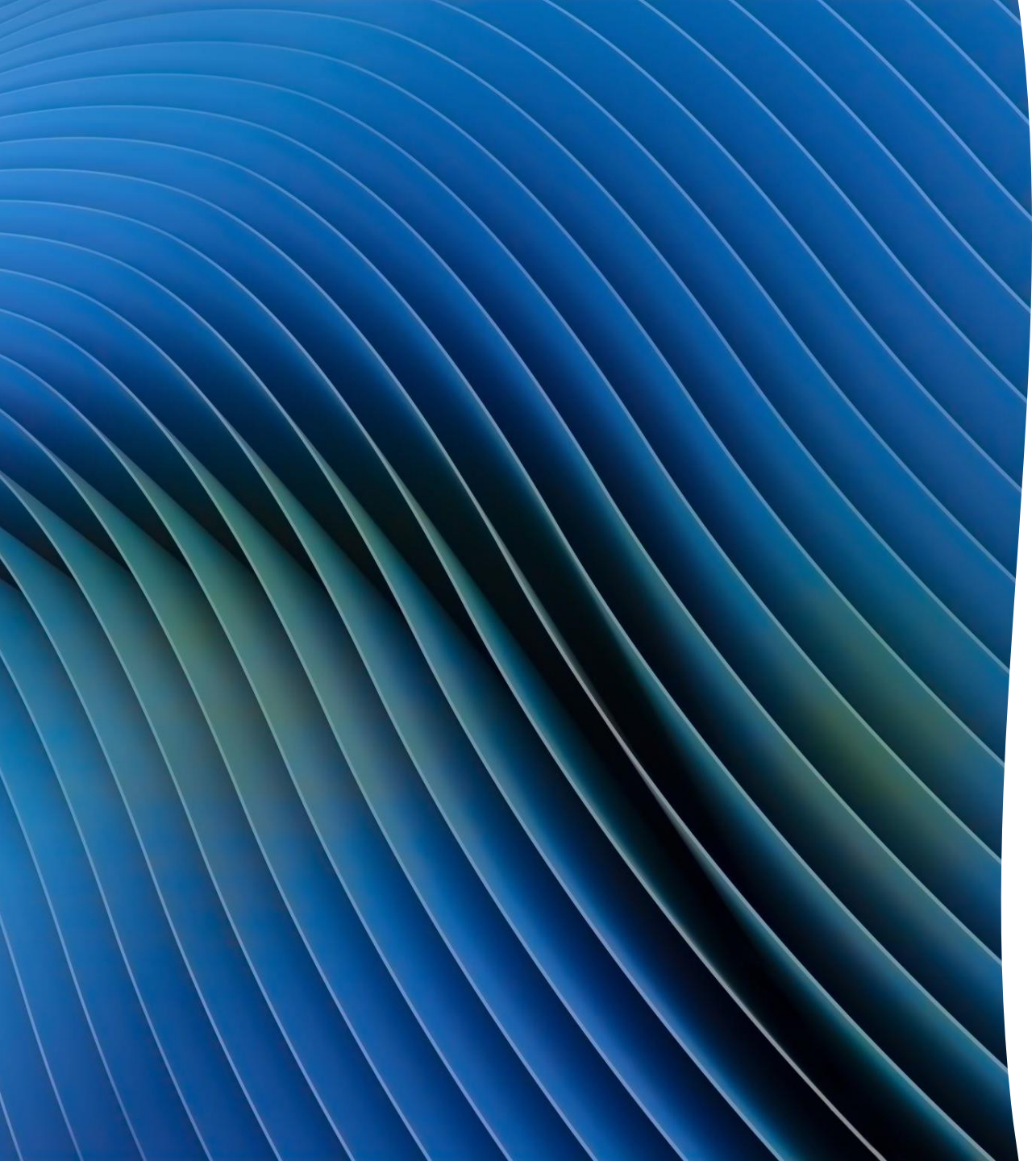
Purpose

According to WHO, globally the number of **people** of all ages visually impaired is estimated to be 285 million, of whom **39 million are blind**.

They are suffering a lot in their daily activity.

The purpose of the project is developing an affordable and efficient way to help blinds people to navigate with greater comfort, speed and confidence.

Prototype



Feature

The device can detect physical objects using ultrasonic sensor.

Warning user with sound and vibration about upcoming objects.

Advantage

- Affordable
- Applicable for both indoor and outdoor
- Wearable.
- Easy to use.
- More reaction Time.
- Less power consumption

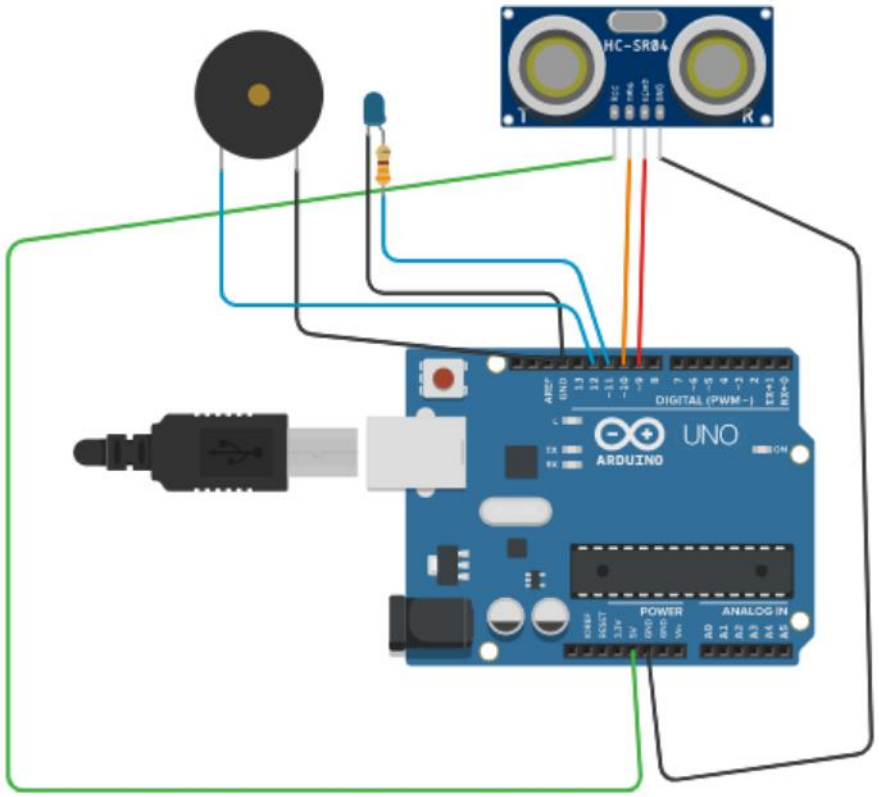
Components and Costs

- Arduino UNO R3: $30
- Ultrasonic Sensor – HC-SR04: $3
- LED indicator: $0.25
- Mini Breadboard: $3
- Buzzer: $0.50
- Battery and others connection: $2

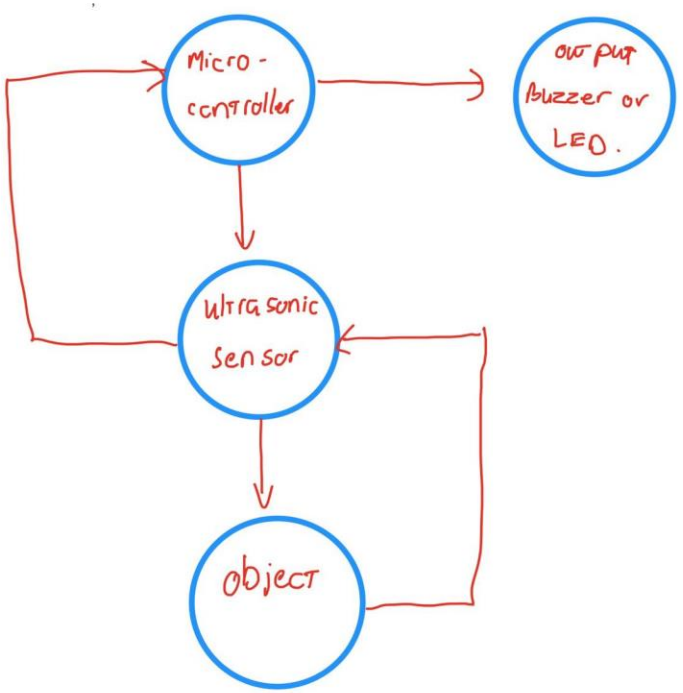
Total Cost:
$38.75

Simulation.

[Start Simulating | Tinkercad]



Flow Chart


Micro -
controller
output
Buzzer or
LED.
ultrasonic
sensor
object

Limitation

This project is only used for blind people, who get affected in their daily life.

This project is only working in one direction.

Conclusion

The main purpose of this study is to produce a prototype that can detect objects in front of users and send the warning signal, in the form of noise and vibration, in a long-distance range.

The project is to help people with visual disability to navigate objects, give more reaction time and increase safety.