A Project Report

on

Smart Umbrella for Blind People

Submitted in partial fulfillment of the

requirement for the award of the degree of

Bachelor of Technology in Computer Science and Engineering

Under The Supervision of
Mr. E. Goutham
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SCHOOL OF COMPUTING SCIENCE AND ENGINEERING

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

GALGOTIAS UNIVERSITY, GREATER NOIDA, INDIA

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SCHOOL OF COMPUTING SCIENCE AND ENGINEERING
GALGOTIAS UNIVERSITY, GREATER NOIDA

CANDIDATE'S DECLARATION

I/We hereby certify that the work which is being presented in the project, entitled **"Smart Umbrella for Blind People"** in partial fulfillment of the requirements for the award of the **BACHELOR OF TECHNOLOGY IN COMPUTER SCIENCE AND ENGINEERING** submitted in the **School of Computing Science and Engineering** of Galgotias University, Greater Noida, is an original work carried out during the period of **JULY-2021 to DECEMBER-2021**, under the supervision of **Mr. E. Goutham, Assistant Professor**, **Department of Computer Science and Engineering** of School of Computing Science and Engineering, Galgotias University, Greater Noida

The matter presented in the project has not been submitted by me/us for the award of any other degree of this or any other places.

19SCSE1120009 – ARCHIT SINGH
19SCSE1180054 – MOHAMMAD MURTUZA

This is to certify that the above statement made by the candidates is correct to the best of my knowledge.

Supervisor

(Mr. E. Goutham, Assistant Professor)

CERTIFICATE

The Final Thesis/Project/ Dissertation Viva-Voce examination of **19SCSE1120009 – ARCHIT SINGH, 19SCSE1180054 – MOHAMMAD MURTUZA** has been held on _____and his/her work is recommended for the award of **BACHELOR OF TECHNOLOGY IN COMPUTER SCIENCE AND ENGINEERING**.

Signature of Examiner(s) **Signature of Supervisor(s)**

Signature of Project Coordinator **Signature of Dean**

Date:

Place:

ABSTRACT

Technologies are rising very rapidly, allowing people to make their lives safer and simpler. The smart umbrella/umbrella is a tool for helping people who are sightless to recognize their path. Blind people suffer from a loss of ability to perform their day-to-day activities, from going down the street to visiting friends or relatives, or any other everyday things. Therefore, by making a umbrella/umbrella that will allow the person to walk safely without fear of hitting anyone on the way or other solid objects, the solution to this major problem is designed. The umbrella/umbrella was designed using tools from Solid Jobs. Using Proteus tools to design and model electrical circuits, the electric circuit was simulated. We used ultrasonic sensors to do this. In the umbrella/umbrella, one sensor was mounted and the other two were located on both sides, left and right. Vibrating motor and buzzer alarms were used to sense the motion from almost every side to warn the person if some obstruction is identified near him and led to tell the person who is coming towards him. It will save blind person from rain and sun and radium reflectors on the top of the umbrella.

Table of Contents

List of Figures

CHAPTER-1

Introduction

Millions of people are visually impaired by WHO worldwide. In Brazil,18.8% of the population reported that they had reduced vision. There are different diseases like Cataracts, glaucoma, displacement of the retina, eye related trauma and old age ailments etc. are the most common cases [3]. Visually disabled people face various challenges with their daily lives, such as literacy, physical exercise, socialization, schooling and in particular, travel. The absence of vision has been shown to have a significant effect on both the gait rhythm and the speed of walking. For visually disabled people, travelling alone, that is, without the aid of others is a major challenge that leads to anger, low morale, diminished autonomy, and threats to physical protection [4]. The visually impaired person requires assistive devices to increase mobility (AT) [5]. AT for visually disabled persons, According to Bhowmick and Hazarika, the study field is becoming increasingly important and has a very large general effect because of the old age and blindness of the population. For those without vision, the white cane is no doubt the most ordinary and convenient AT interface [6]. A white cane provides people with tangible awareness of the world, helping them to explore those environments and to understand barriers, especially on the ground. The white cane is often a symbolic unit, such as furniture, stairs, etc. Notifying audiences that a person's vision has declined. In rushed places like airports where one have to be cautious about the use of cane, this non literal aspect is extremely useful. The stopping of bus is the non literal aspect as the person and the driver both have to be super cautious. [7]. Although the white cane encourages the intention and endurance of the user, it has a narrow scope and does not identify airborne complication such as rocks and garbage that have been stopped. Inevitably, this triggers injuries, placing consumers at physical risk. According to a survey of 300 blind participants by Manduchi and Kurniawan, 40 percent reveal head injuries yearly. In addition, they have stated that 23 perecnt accidents have health side effects [8]. There is an electronic device which captures and transmits the factors of environment to the user for autonomous mobility know as Travel Assist [9]. 10 . Normally, different types of sensors are used to alert the person by vibrating of umbrella or making noise if something comes in-front.

The most important factor which makes Eta greater than a normal white cane is that it can sense objects which comes or may come in contact with the upper body which is a good advancement for security[10]. These tend to assist visually impaired persons with independent and secure mobility, but there is no proof that such systems can identify obstacles and optimize mobility efficiency tasks [11].

Some models of ETA with ultrasonic sensors, such as Cane, are commercially available. Ergonomic principles and prices lead to the strongest point different among them and the electric cane used by them. The Cane and Guide equipment prices more than normal [12]. The suggested, unlike the SmallGuide system, The traditional cane handle is maintained by an automated cane, which is easy to handle, as the smallGuide is not of use, and for it will need help of a person it may be less prone to danger for user. As for Cane, the suggested equipment uses single sensor, which simplifies uses of it and decreases properties of equipment. In literature evaluation found that several experiments are done without Participants with vision disability [13]. As functional replacements for blind subjects, one can challenge the validity of studies involving non-visually impaired attendees. Visually special attendees are faces the use of many canes to view the world, whereas non-visually disabled individuals generally have little or no blindfolding instruction [14].

Therefore, major intention of this experiment to review the working of empirical conformation on potential performance disparity between visually special and normal impaired attendees, assuming that visually special people will excel because of their habit of being blind and better. Therefore, our first argument was as follows:

Statement 1

Person who can see are not the right people to do the experiment on by covering their eyes or something. Without comparing those canes blind people do so.Hence, there is no scientific evidence in the scientific literature to keep up the state that white power canes represent refinement over the standard canes. The next purpose of this experiment was to estimate whether automated cane providing extra information of 11

barriers which is advantage. All expected the power cane over the white cane to lead to better performance. Therefore, our second argument is as follows:

Statement 2

Electronic canes lead to increased endurance which are hitech than older one with additional obstacle signals

[1]. Thus the groundbreaking which is discussed in the statement, addressing topics that have not been properly discussed in the literature

[2]. In this paper is worded asdiscussed below: a summary of the previous ETA reports. The setup, the object and samples used for the activities performed and the interpretation of the input are shown here. The walk has been seen [3]. Speed and obstacle identification results. The findings finish the article with proposals for future jobs.

The following challenges and issues are measured

- Little & permanent path to follow schedule .
- We cannot attach GPS because of change of coordinates to follow path.
- We needed help of small sensors.

Problem Formulation

Blind people do lead a NORMAL LIFE with their own style of doing things. Blind people confront a number of visual challenges every day – from reading the label on a frozen dinner to figuring out if they're at the right bus stop. While many tools have been introduced to help address these problems using computer vision and other sensors (talking OCR, GPS, radar canes, etc.), their capabilities are dictated as much by the state-of-the-art in technology as they are by real human problems. But, they definitely face troubles due to inaccessible infrastructure and social challenges. Let us have an empathetic look at some of the daily life problems faced by the blind people.

Some problems are listed below:-

- Navigating Around the Places
- Finding Reading Materials
- Arranging Clothes

And many more……

From these the most faced problem is how to walk safely on the road. Is there any device which can help them to face this problem off. Sometimes the person or vehicle do not recognizes that the person is blind and because of this he/she can harm the blind person by hitting them by your vehicle or it can harm blind person in many other ways.

CHAPTER-2

Literature Review

Many researchers have explored this area of research and significant work is done for blind friends. Many ultrasonic blind umbrellas have been made to facilitate blind friends but they are not intelligent. They have used buzzers and alarms for warning the blind friends but they do not direct them to choose the safe direction.6 NAVBELT and GUIDCANE7 are two robotics-based technologies that are used for obstacle avoidance for guiding blind friends. NAVBELT is a belt which contain array of ultrasonic sensors it basically guides the blind friend through stereo earphones about the direction through which they walk easily. It sends acoustic signals to user but it doesn't help in fast walking because user cannot understand guidance signals in time. GUIDCANE uses7 the same robotics technology but it guides the user through a wheel attached at the end of cane; when it detects an obstacle its wheel move in opposite direction and the user feels the movement and walk fast with it. In Ultrasonic Blind Walking Umbrella, 82 ultrasonic sensor is used to sense the obstacle (if there is any). The signal is then send to microcontroller to operate a buzzer. There is one more advantage of this system. Sometimes when the blind loses their umbrella or forgot where they have put it, they can find it by using the wireless remote. Wearable obstacle avoidance9 for blind has been created to ease blind people. Two ultrasonic sensors are attached on the glasses which send the direction and the size of obstacle through stereo audible sound via headphones. This helps user in walking.

Proof-of-concept designs have been proposed for some technologies (see for example, Dakopoulos and Bourbakis studies of general visually impaired assistive devices) . Tapu et alsurvey .'s of visually impaired wearable assistive devices, and Motta et alsurvey .'s of electric white canes) . Unfortunately, all of the studies mentioned are explanations of the technological method and do not involve research with real customers Consequently, these observations do not provide a fresh perspective into the corporate appropriateness of these developments. Examples of electronic white cane tests without user monitoring involve EyeCane, which is simply a distance measurement instrument, the affordable infrared sensor-based systems of Nada et al., the ultrasound cane of Sheth et al. Using pre-recorded audio for feedback, the cane of Bouhamed et al. uses both an ultrasound and a monochrome monitor, the cane of Anwar and Aljahdali uses five sensors like ultralight detectors, Faria et alwhitecane .'s with tags and readers of the latest radio frequency identification technology, Pallejà et alwhisker-inspiredwhite .'s cane sensors, laser range scanner

navigation, flashlight-like scene discovery with an environmental RFID tag. Other studies have discussed user reviews more precisely, but without recorded user trails, to suggest navigation direction, advanced user tests, etc.

An experiment for blindfolded non-visually impaired consumers has also been performed in several experiments proposing electronic white cane technology. Perera et aluse .'s of a body area network based on ultrasound. Another solution includes the use of coloured tape on the floor that acts as guidelines for sensors on the cane in optical colour detection. Apart from RFID for positioning absolution . With 10 blindfolded participants, Shiizu et al. tested such a method, While Fukasawa and Magatani were testing a related scheme using 3 people by covering their eyes. He suggested the use of a laser pointer and handheld camera to implement low-cost distance measurement The setup is done in a way where the camera and the scene records the interaction between laser point and scene. One could calculate the radius. They tested their prototype using 16 blindfolded subjects. Wachaja et al., who were responsible for enforcing a The smart walker, based on recent advances in robotics for visually impaired people with limited muscle function, has taken a radically different approach. Both 9 blindfolded and 1 blind participant, their method was tested. In order to investigate the sense of distance by vibration Okazaki and Kajimoto had an experiment of eleven blindfolded subjects. Any trial Observations of blind people using technologies will also be published. An experiment was conducted in the suburbs of brazil by Garcia and hersh ramirez in which smart canes were provided to two people with less vision and three visually special people. General happiness and usability were found by them. The questioner was sent to eighteen cane users around Brazil was included in the second portion.. Dharmasena, Menikdiwela, and Abeykoon by use of 3 vibrators, 1 vibrator per sensor , a sonarbased system with vibrotactile feedback was evaluated . Their trial involved 7 blind schoolchildren, five sections of which covered system engagement, listening, obstacle walking Height of barrier and distance estimate .The difference between the input required by blind people relative to non-visually disabled people was observed by Williams et al. they got to know that visually special people uses their small contacts with object to set a marker for big things like staircase, based on focus groups of 20 people. Sighted people like open areas because they give a clear description, while such open spaces do not give adequate signs to blind people, such as walls and other. To artefacts. Blind people tend to walk with others by grabbing onto the sighted individual's arm and watching their body movement. In order for avoiding practising under dangerous conditions such as heavy traffic, learners can test an

augmented reality device for training white cane skills. Thirteen low-vision people were interviewed by Zhao et al. to describe how they manage. They observed that improvements in the ground surface were the most noticeable and that profound

judgments could be backed by modern technologies. Eight blind people were interviewed by Nicolau et al. To gather intuition and link current sitiations.Spot features and scan small print signals at the time of navigation it is most difficult for people with impaired eyesight.

Design Methodology

The function behind this blind umbrella is that it is used as a sensory aid for blind people for special purposes. The circuit supplies the circuit with a 5V power supply which keeps its power supply output at a constant level. It is commonly used for target tracking using an ultrasonic sensor and an IR sensor. If some object is nearby, by calculating the distance between the object and the operator, the ultrasonic sensor senses the object and sends the data to the Arduino UNO. For the distance to be calculated An entity measures the difference between the signal being transmitted and the signal being received. *Distance=speed*time The speed of the air traffic signal is 341 m/s. Between transmitting and receiving the signal, the time is determined. As the signal's distance travel is double, it is split by two, i.e. to detect the item, the Distance=*Distance/2 IR sensor is mounted at the right and left of the handle. Since the range is so limited, it detects closer objects. Arduino processes This data and measures 14 conditions with the command. When an object is located nearest, it passes the order from the speaker or microphone to the recipient. The command is already stored in the voice replication module that sends an object warning message to the user. The state of the order is as follows:[1] If the distance between the target and the user is 30 inches, the command would be submitted as the barrier is closest to the person. [2] If the object is about 60-90 inch, it will send. The blind people can walk by using smart umbrella as shown in Figure 1.

Figure 1: Blind people can walk by using smart umbrella

This Smart umbrella uses a sensor which tells us about the space between the things kept around us, a sensor to detect illumination conditions, and a controller from which the impaired person could find the umbrella. Different input are indicated the person by sound making sensor.As we know , instead of Buzzer, you should use a sensor which shakes and indicates engine and make a lot more progress using your imagination, the flowchart for using superstick for blind people as shown in Figure 2.

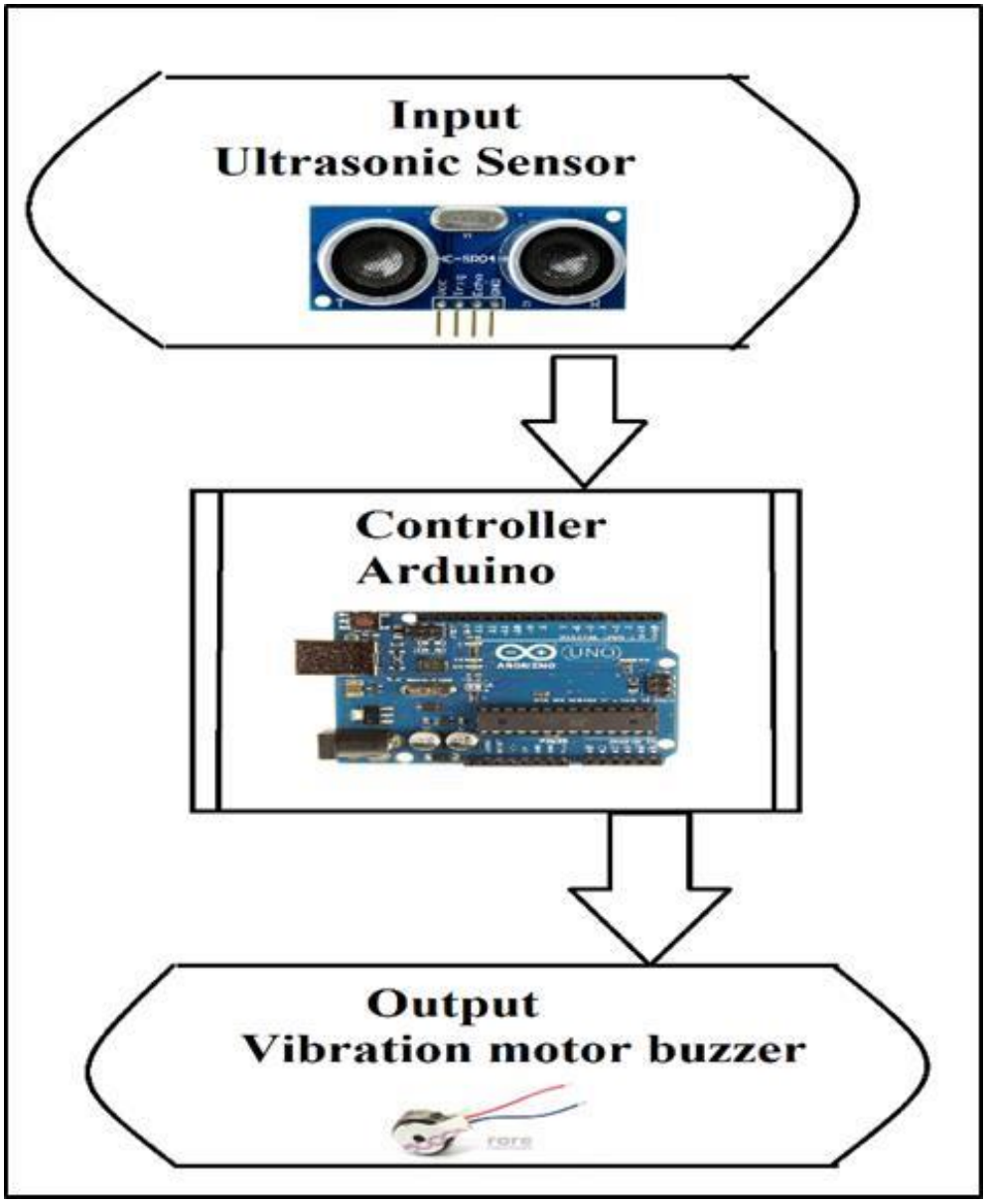

Figure 2: Flowchart for smart umbrella used for blind people

Arduino Nano

Arduino nano is same as the Arduino UNO but this one comes in a smaller size which has the same features and easy to use

Like Arduino UNO. And they both are made using the same software's.

Arduino Nano is a small, compatible open-source electronic development board based on an 8-bit AVR microcontroller. Two versions of this board are available, one is based on ATmega328p, and the other on Atmega168.

Arduino Nano can perform some functions similar to other boards available in the market, however, it is smaller in size and is a right match for projects requiring less memory space and fewer GPIO pins to connect with.

This unit features 14 digital pins which you can use to connect with external components, while 6 analog pins of 10-bit resolution each, 2 reset pins, and 6 power pins are integrated on the board.

Like other Arduino boards, the operating voltage of this device is 5V, while input voltage ranges between 6V to 20V while the recommended input voltage ranges from 7V to 12V.

The clock frequency of this unit is 16MHz which is used to generate a clock of a certain frequency using constant voltage.

Figure 3: Arduino Nano

Hc-Sr04 (ultrasonic sensor)

This Sensor tells us about the space between the things kept around us.

This sensor produces signal which moves to solid things in close range and bounces back which can be taken by the person receiving.

The HC-SR04 Ultrasonic Distance Sensor is a sensor used for detecting the distance to an object using sonar. It's ideal for any robotics projects your have which require you to avoid objects, by detecting how close they are you can steer away from them!

The HC-SR04 uses non-contact ultrasound sonar to measure the distance to an object, and consists of two ultrasonic transmitters (basically speakers), a receiver, and a control circuit. The transmitters emit a high frequency ultrasonic sound, which bounce off any nearby solid objects, and the reciever listens for any return echo. That echo is then processed by the control circuit to calculate the time difference between the signal being transmitted and received. This time can subsequently be used, along with some clever math, to calculate the distance between the sensor and the reflecting object!

Figure 4: Ultrasonic Sensor

LDR

Photo resistors, are the most widely used light-sensitive instruments to detect light. They have very high resistance in less light and when there is lighter, depending on the light level, the resistance decreases significantly, even down to a few ohms. LDRs have a sensitivity that ranges according to the light wavelength.

Applied and are instruments that are nonlinear. They are used in many applications, but other instruments, such as photodiodes and phototransistors, are often made obsolete. In response to environmental protection issues, certain countries have banned LDRs made of lead or cadmium.

Figure 5: LDR

Buzzer

An audio communication unit that can be electronic, electromechanical, or piezoelectric (piezzoelectric) is a buzzer or beeper. Alarms, timers, and also feedback validation by pressing of key are common applications of beepers.

Figure 6: Buzzer

Light-emitting diode (LED)

If current passes through it then it is a semiconductor light source that produces electrons which recombine with holes, photons are formed by production of energy. Phosphor is giving the white color of the led and the color is based on the energy taken to pass the gaps of semiconductors.

Figure 7: LED

IC7805

IC7805 is a regulator which is positive and regulates the input and output of the voltage.

for example:A supply of 6v is given so IC7805 will give +6v output.

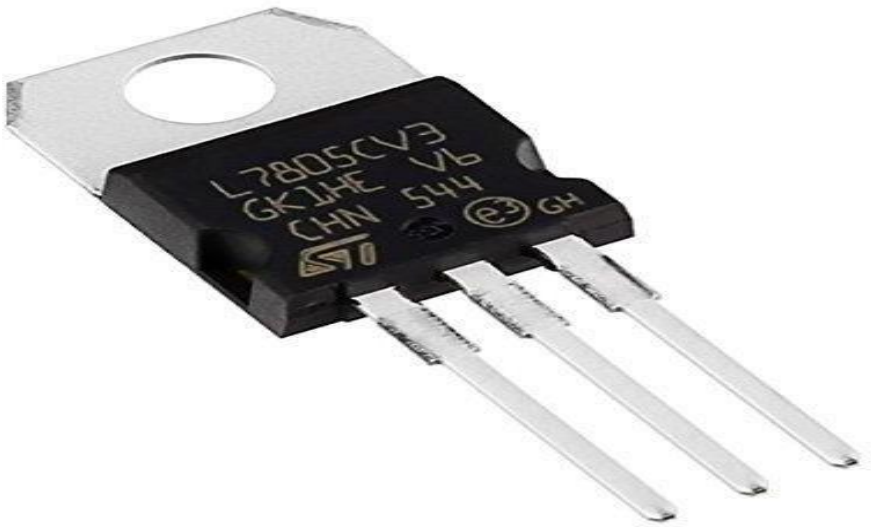

Figure 8: IC7805

33MHz RF transmitter and receiver

This hybrid RF transceiver module provides a complete solution for the RF transmitter and receiver module that can be used to transmit data from any normal CMOS/TTL source at up to 3 KHz. The transmitter module is very easy to operate and provides low current consumption (typical. 11mA). Data may be provided directly from a microprocessor or encoding unit, thus keeping the part count down and maintaining low hardware costs.

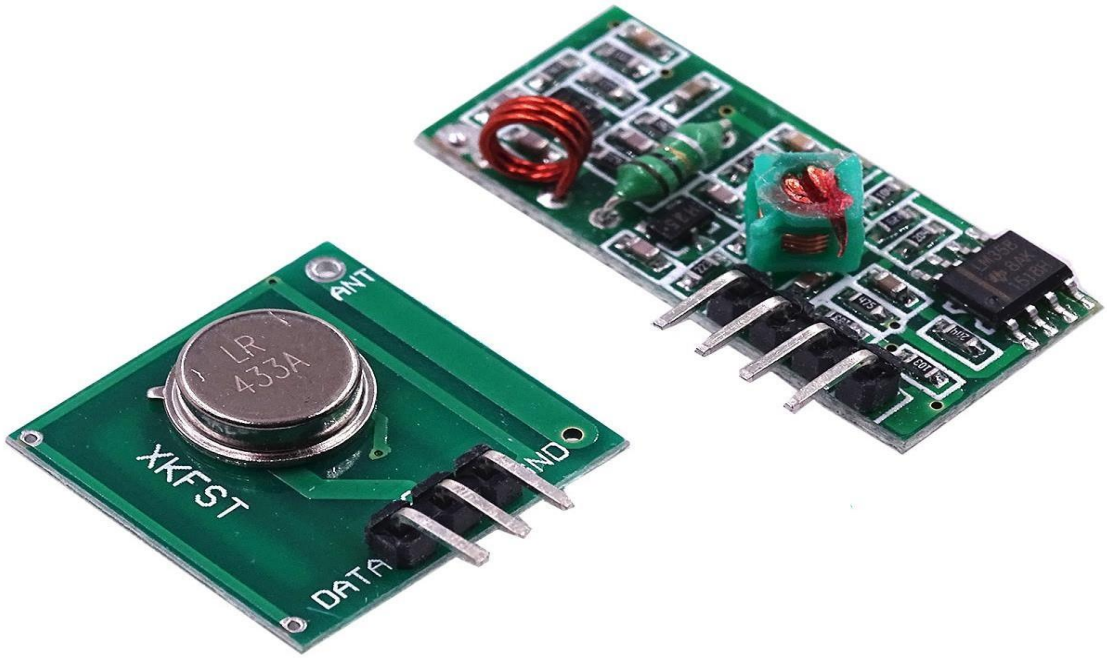

Figure 9: Transmitter and Receiver

Resistors

It is an equipment with yield electrical points that applies charged resistance as an aspect of the circuit. These are very often used in different appliances to help the flow of current. The main function of this equipment is to control flow of current. We can notice the humidity, illumination and all with the help of variable resistors.

Figure 10: Resistor

Capacitors

Capacitor retains electrical energy.Capacitors value is capacitance and it is a two-terminal device.While any occurs in the vicinity of a circuit between any two electrical conductors, a capacitor is a and equipment used to store electrical energy and provide capacitance to a circuit. Also called a condenser.

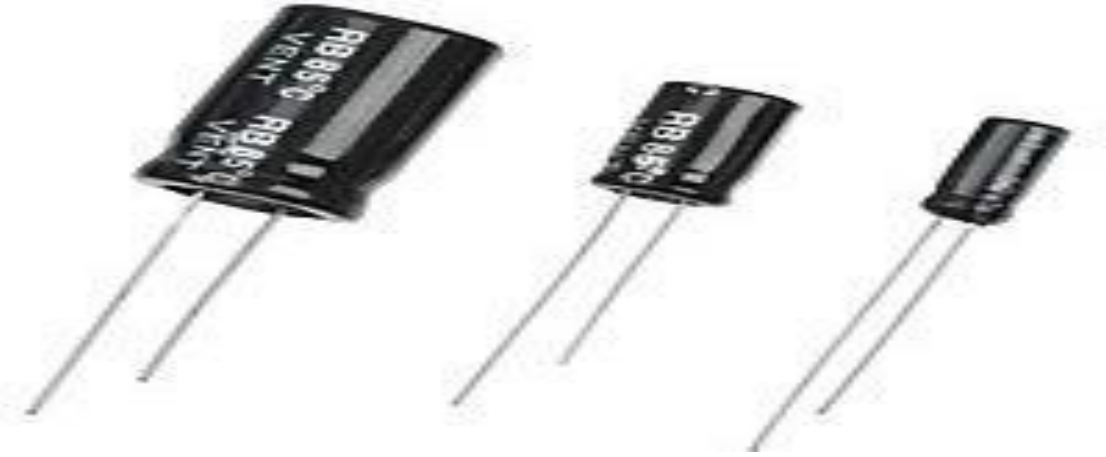

Figure 11: Capacitor

Push button

A push-button is a simple metal or plastic button which is used controlling an equipment. In order to match a human finger or a hand, the surface is normally smooth or shaped so that it can be quickly depressed or shifted. Buttons are more commonly twisted switches, although certain unbiased buttons do require a spring to return to their un pushed buttons state. Words for "pushing a button

That involve pushing, depressing, kicking, and throwing.

Figure 12: Push Button

Perf board

Perfboard is an electronic circuit prototyping material. It is a flat solid layer With pit around the grid at equal distance, generally.1-inch square grid. Round or square copper pads surround these openings, while bare boards are available as well. On just one side of the surface, cheap perfboard may have pads, whereas higher padding can be found on all sides of board Because each padding is insulated. all contacts are covered with sheets and different methods by manufacturer.

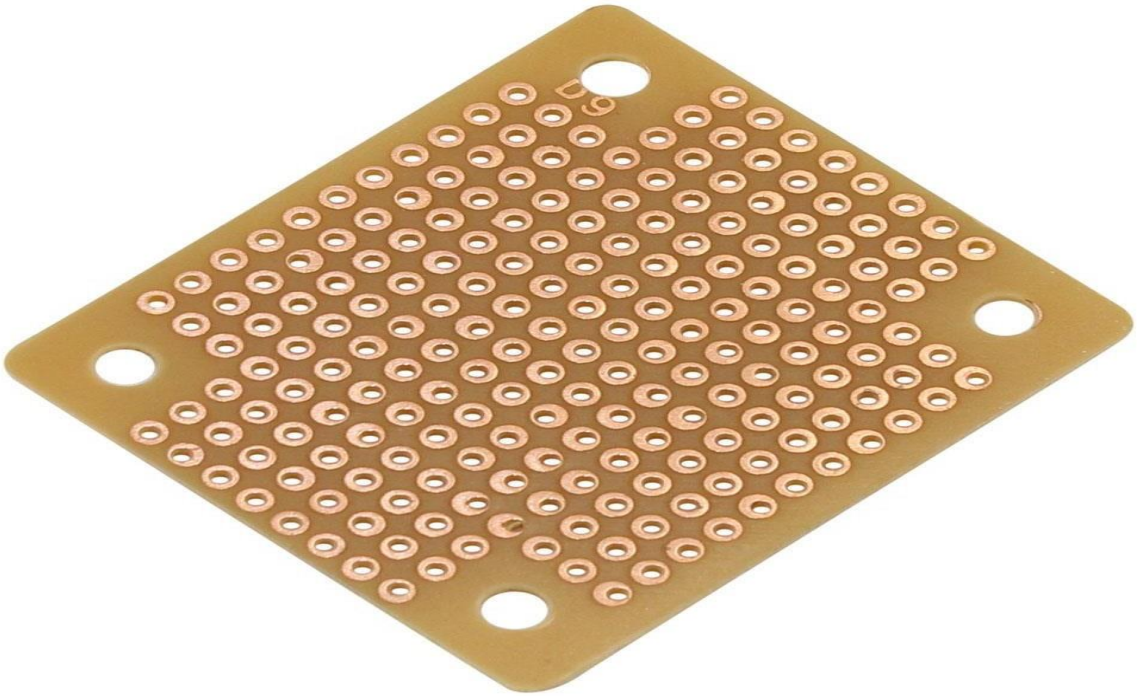

Figure 13: Perf Board

Soldering Kit

The hand tool used for soldering is a soldering hammer.it is used to fix two parts two eachother and its mostly used to join very small connections with the help of of its minute metal head which gets heated and it is power by a cell or a by a cable which connects to wall outlet. Through burning the gas in a small tank, cordless irons can be heated using a catalytic heater instead of a spark Occasionally. Just a big copper bit on a umbrella, heated in a wildfire, was a basic iron less commonly used than in the past...

Figure 14: Soldering Machine

Batteries

The battery which we are using is a 9 volt battery which is very common and was first used in radios. Battery is rectangular in shape with polarized snap connector at the top. we can see these types of batteries in smoke alarms , police intercoms and toys.

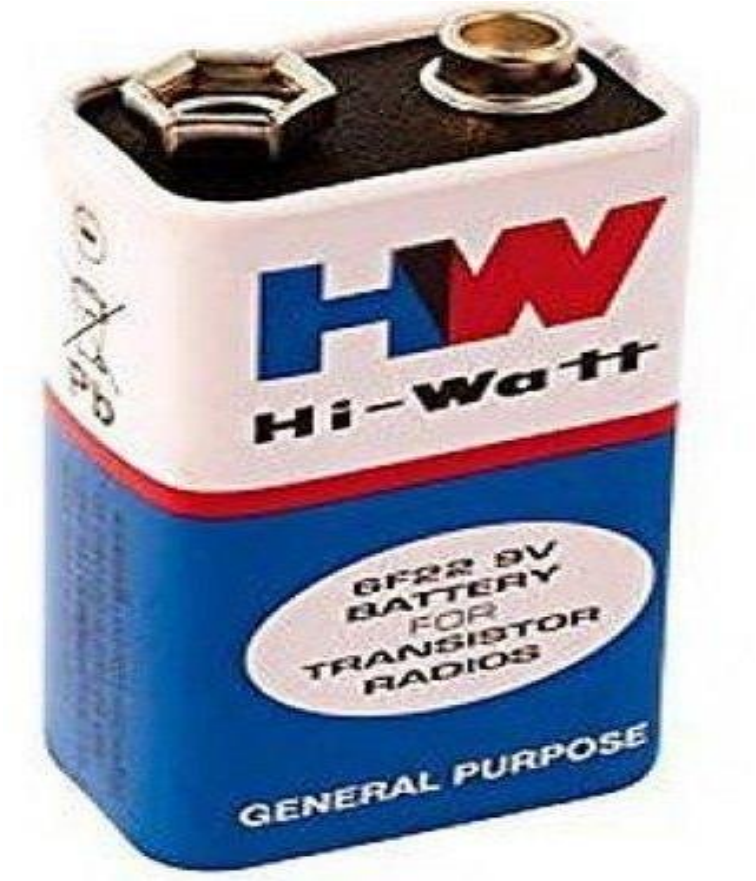

Figure 15: Battery

Clapping switch

A fascinating hobby circuit that switches on the lights with a clap sound is the clap switch. While its name is Clap switch, any sound of about the same pitch of the Clap sound can be switched ON. The primary feature of of this clap switch is the mic, which we have used as a sensor for sound.

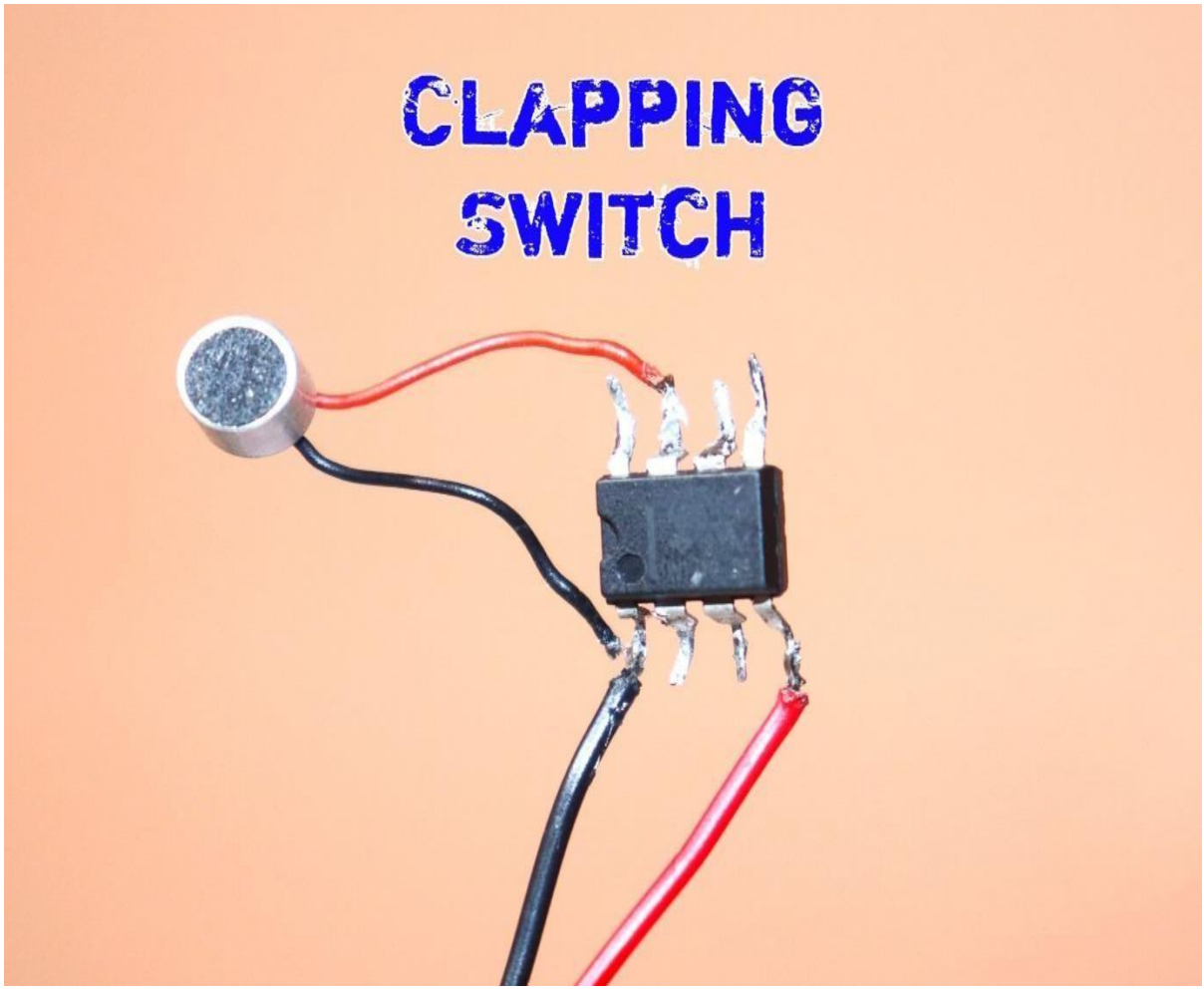

Figure 16: Clapping Switch

CHAPTER 3:
Functionality/Working of Project

The Model Architecture

For this assure that ultrasonic sensor, 2 buzzer, Led should be attached to breadboard then we should connect these components to Arduino by wires after that the circuit should be attached to a umbrella with a tape and connect it to the system like laptop so that we can program it using the Arduino IDE. And it is good to use after fabrication

Figure 17: Model Architecture

Working of Project

The smart umbrella automatically detects the obstacle in front of the person and give him a response to the person by vibrating the handle of the umbrella and also with a warning sound. Through this, the blind person can aware about the obstacles in front of him. Radium band are also present on the top of the umbrella which will help people to spot the blind person in low light or at the night. And a person can track using clapping switch and buzzer.

Figure 18: Blind people can walk by using smart umbrella

Merits Of the Proposed System

The smart blind umbrella automatically detects the obstacle in front of the person and give him a response to the person by vibrating the umbrella and also with a warning sound.Through this, the blind person can aware about the obstacles in front of him. And a person can track using clapping switch and buzzer.

Architecture Diagram

For this assure that ultrasonic sensor, 2 buzzer, Led should be attached to breadboard then we should connect these components to Arduino by wires after that the circuit should be attached to a umbrella with a tape and connect it to the system like laptop so that we can program it using the Arduino IDE. And it is good to use after fabrication.

Circuit Diagram of Arduino

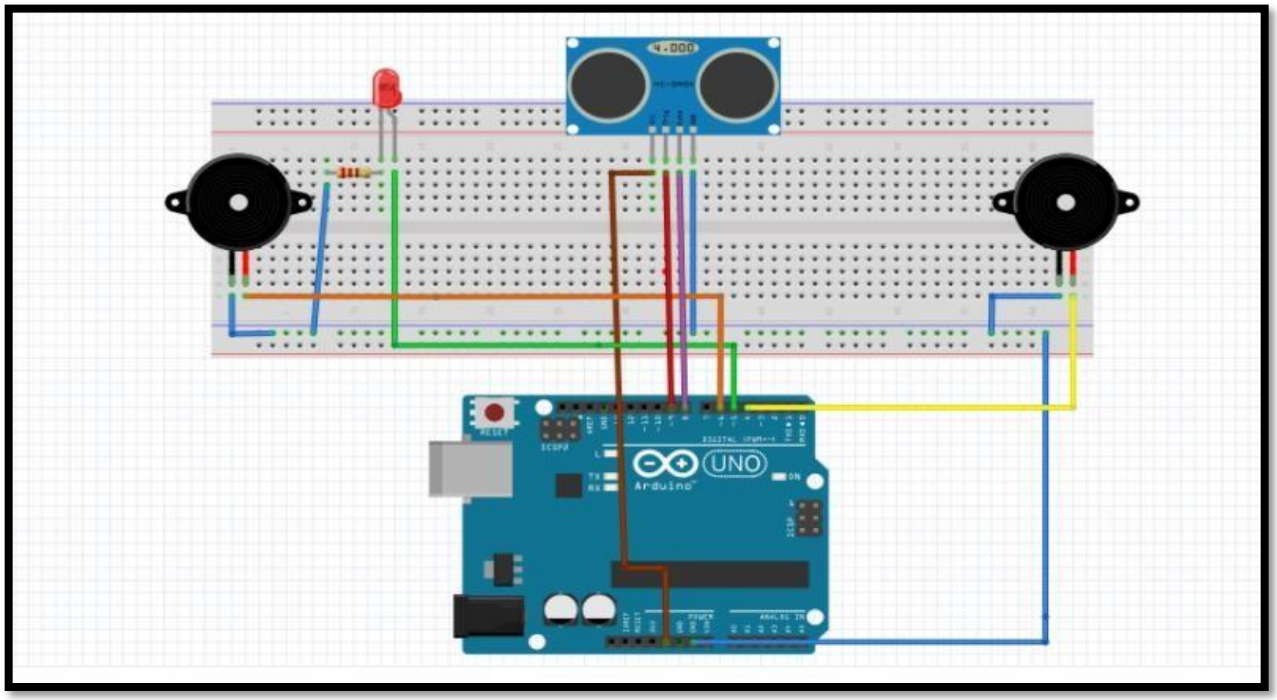

Figure 19: Circuit diagram

Structure Diagram

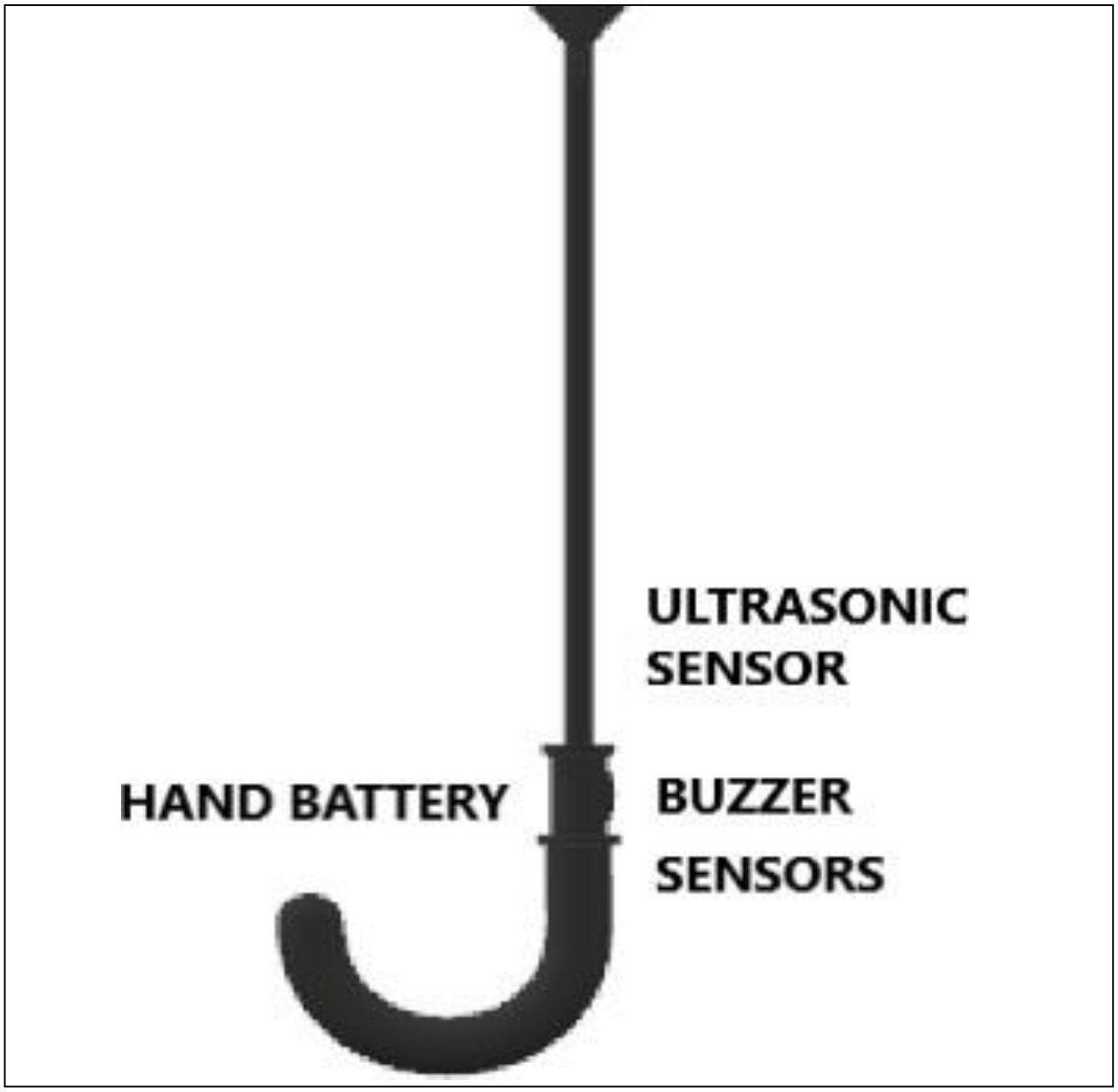

Figure 20: Structure Diagram

Complete Work Plan Layout

MODULE 1 will consist planning, assigning duty, arranging components this will take approx. 20 days in which will assign the duties of each and every person. Arranging all the components from market like wires, Arduino etc.

CODE-

```
const int trigPin = 8;
const int echoPin = 7;
const int buzz = 6;
const int vib = 2;
const int led = 13;
// defines variables
long  duration;
float  distance;
void setup() {
pinMode(trigPin, OUTPUT); // Sets the trigPin as an Output
pinMode(echoPin, INPUT); // Sets the echoPin as an Input
pinMode(buzz, OUTPUT);
pinMode(led, OUTPUT);
pinMode(vib, OUTPUT);
Serial.begin(9600); // Starts the serial communication
}
void loop() {
// Clears the trigPin
digitalWrite(trigPin, LOW);
delayMicroseconds(2);
// Sets the trigPin on HIGH state for 10 micro seconds
digitalWrite(trigPin, HIGH);
delayMicroseconds(10);
digitalWrite(trigPin, LOW);
// Reads the echoPin, returns the sound wave travel time in microseconds
duration = pulseIn(echoPin, HIGH);
```

```
// Calculating the distance
distance= duration*0.034/2.0;
// Prints the distance on the Serial Monitor
Serial.print("Distance: ");
Serial.println(distance);
if (distance < 70)
{
Serial.print(distance);
Serial.println("Object Alert");
digitalWrite(vib, HIGH);
digitalWrite(buzz,HIGH);
delay(100);


digitalWrite(buzz,LOW);
digitalWrite(led,HIGH);
delay(100);


digitalWrite(led,LOW);
digitalWrite(vib, LOW);
for (int i= (distance-40); i>0; i--)
delay(10);
}
}
```

MODULE 2 will consist of assembling, programming, fabrication and two rounds of testing. First all the components collected in Phase 1 are assembled. And after that programs are given to Arduino by system. After that fabrication process will take place which will ensure the long life of the umbrella. After that testing of two rounds will take places. And last public reviews will be collected.

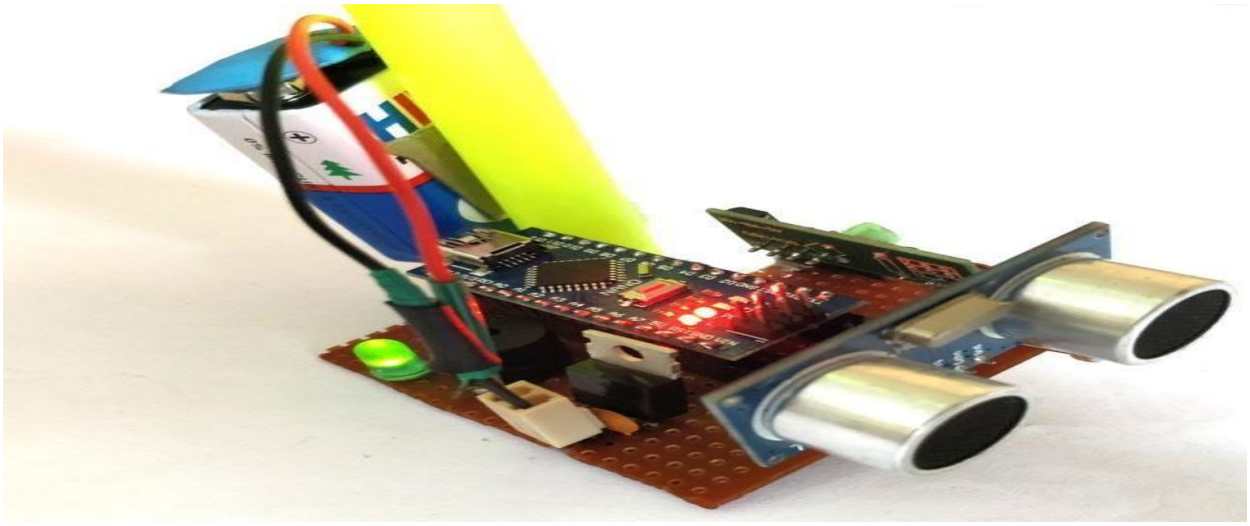

Figure 21: Module 2 Diagram

CHAPTER 4:
Results and Discussion

Smart umbrella senses the surrounding environment for hindrance or obstacles which may hurt the visually special person and alerts him by making a sound or with a small firm vibration. And a person can track using clapping switch and buzzer.

The smart umbrella is an umbrella as well as a stick which automatically detects the obstacle in front of the person and give him a response to the person by vibrating the stick and also with a warning sound. Through this, the blind person can aware about the obstacles in front of him and umbrella can protect him from rain and heat.

For this assure that ultrasonic sensor, 2 buzzer, Led should be attached to breadboard. Then we should connect these components to Arduino by wires after that the circuit should be attached to an umbrella with a tape and connect it to the system like laptop so that we can program it using the Arduino IDE. And it is good to use after fabrication. and a person can locate the smartchatri by just clapping because of clapping switch.

CHAPTER 5:
Conclusion and Future Scope

Conclusion

In the end, Smart umbrella is a device that helps visually special people live the most possible normal life for them. In order to ensure their safety, the framework also takes steps . This initiative would help all the many visually special people and help them to commute better. It was done to assist visually impaired person to advance properly It is required to facilitate persons which are special and to ensure their safety.

Future Enhancements

In future GPS can help enhance the smart umbrella which can help the visually special to source information for the road. As a consequence, shorter and easy routes can be taken with help of GPS. Cellular will assist with any immediate injury in the future. It may also include a special arrangement for attaching the smart umbrella to the aadhar blinds card, helping the government handle the physically impaired much more. Water sensor that detects some form of water that helps the blind to walk comfortably in order to prevent falling.

- GPS will support people who are blind to the source & destination route information.
- GPS will help you locate the shortest and fastest route.
- Cellular can help with immediate causality in future.

Research Paper Communication

3rd IEEE International Conference on Advances in Computing, Communication Control and Networking : Submission (1369) has been created.

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Microsoft CMT <email@msr-cmt.org> Tue, Dec 7, 12:22 AM

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Hello,

The following submission has been created.

Track Name: General

Paper ID: 1369

Paper Title: Design and Implementation of Super Umbrella For Blind People Using Internet of Things

Abstract:
Technologies are rising very rapidly, allowing people to make their lives safer and simpler. The smart umbrella/umbrella is a tool for helping people who are sightless to recognize their path. Blind people suffer from a loss of ability to perform their day-to-day activities, from going down the street to visiting friends or relatives, or any other everyday things. Therefore by making an umbrella/umbrella that will allow the person to walk safely without fear of hitting anyone on the way or other solid objects, the solution to this major problem is designed. The umbrella/umbrella was designed using tools from Solid Jobs. Using Proteus tools to design and model electrical circuits, the electric circuit was simulated. We used ultrasonic sensors to do this. In the umbrella/umbrella, one sensor was mounted and the other two were located on both sides, left and right. Vibrating motor and buzzer alarms were used to sense the motion from almost every side to warn the person if some obstruction is identified near him and led to tell the person who is coming towards him. It will save blind people from rain and sun and radium reflectors on the top of the umbrella.

Created on: Mon, 06 Dec 2021 18:52:31 GMT

Last Modified: Mon, 06 Dec 2021 18:52:31 GMT

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Secondary Subject Areas: Not Entered
Submission Files: RESEARCH PAPER.pdf (363 Kb, Mon, 06 Dec 2021 18:52:26 GMT)

Submission Questions Response: Not Entered

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Hello,

The following submission has been created.

Track Name: I2CT2022

Paper ID: 705

Paper Title: Design and Implementation of Smart Umbrella for Blind People Using Internet of Things

Abstract:
Technologies are rising very rapidly, allowing people to make their lives safer and simpler. The smart umbrella/umbrella is a tool for helping people who are sightless to recognize their path. Blind people suffer from a loss of ability to perform their day-to-day activities, from going down the street to visiting friends or relatives, or any other everyday things. Therefore by making a umbrella/umbrella that will allow the person to walk safely without fear of hitting anyone on the way or other solid objects, the solution to this major problem is designed. The umbrella/umbrella was designed using tools from Solid Jobs. Using Proteus tools to design and model electrical circuits, the electric circuit was simulated. We used ultrasonic sensors to do this. In the umbrella/umbrella, one sensor was mounted and the other two were located on both sides, left and right. Vibrating motor and buzzer alarms were used to sense the motion from almost every side to warn the person if some obstruction is identified near him and led to tell the person who is coming towards him. It will save blind person from rain and sun and radium reflectors on the top of the umbrella.

Created on: Tue, 21 Dec 2021 13:30:49 GMT

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Secondary Subject Areas: Not Entered
Submission Files: RESEARCH_PAPER.pdf (257 Kb, Tue, 21 Dec 2021 13:30:43 GMT)

Submission Questions Response: Not Entered

Thanks,

References

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