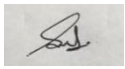
MES COLLEGE OF ENGINEERING, KUTTIPPURAM
DEPARTMENT OF COMPUTER APPLICATIONS
20MCA245 – MINI PROJECT

PRO FORMA FOR THE APPROVAL OF THE THIRD SEMESTER MINI PROJECT

(Note: All entries of the pro forma for approval should be filled up with appropriate and complete information. Incomplete Pro forma of approval in any respect will be rejected.)

Mini Project Proposal No : _____ *(Filled by the Department)*	Academic Year : 2020-2022 Year of Admission : 2020

1. Title of the Project : ANDROID ASSISTANT EYEMATE FOR BLIND AND BLIND TRACKER
2. Name of the Guide : Ms. PRIYA J D
3. Number of the Student: MES20MCA-2041
4. Student Details

Name (in BLOCK LETTERS)	Roll Number	Signature
1. SABAHA MK	41	

Date:07/12/2021

Approval Status : Approved / Not Approved

Signature of Committee Members

Comments of The Mini Project Guide — Dated Signature

Initial Submission :

First Review :

Second Review :

Comments of The Project Coordinator — Dated Signature

Initial Submission:

First Review

Second Review

Final Comments :

Dated Signature of HOD

ANDROID ASSISTANT EYEMATE FOR BLIND AND BLIND TRACKER

SABAHA MK

INTRODUCTION

Blind mobility is one of the main brainstorming challenges that scientists are still facing around different parts of the world and still researching to implement suitable blind assistive devices. In recent years blind mobility has become an important issue since a large number of people are visually impaired and partially sighted. Navigating a blind person is a great challenge as blind person has to rely on other. The simplest and most widely used travelling aid used by all blinds is the white cane. It has provided those people with a better way to reach destination and detect obstacles on ground, but it cannot give them a high guarantee to protect themselves from all level of obstacles. Sometimes it happens that blind people are lost and their guardians are in tension about them. There have been many efforts but even now, it is not easy for the blind people to move independently from one place to another. To solve this great problem we proposed a system, the system where a blind person can move without the help of other and can make emergency call to a predefined number and we can find out him/her easily if he/she is lost.

OBJECTIVES

Basic objective of this system the blind person is navigated through a spectacle interfaced with an android application. The blind person is guided through Bengali/English voice commands generated by the application according to the obstacle position. Using voice command a blind person can establish voice call to a predefined number without touching the phone just by pressing the headset button. The blind assistive application gets the latitude and longitude using GPS and then sends them to a server. The movement of the blind person is tracked through another android application that points out the current position in Google map.

PROBLEM DEFINITION

Of all sensations perceived through our senses, those received through sight have the greatest influence on perception. Sight combined with the other senses, basically hearing, allow us to have a world global perception and to perform actions according to it. For the blind, the lack of sight is a major barrier in daily living: information access, mobility, way finding, interaction with the environment and with other people, among others, are challenging issues. In fact, school and working-age blind have very high an alphabet and unemployment rates. For example, in the US, the blind unemployment rate is around 75% while only 10% of the blind children receive instruction in Braille. Despite this effort, a true is that most schools and employers cannot accommodate blind people. In consequence, the person who is blind and his/her family faces important socioeconomic constraints. As blind person has to depend on others for their day-to-day life so often in our society, that people consider them as a burden. And often it happens that blind people fall down and get hurt while walking in the road so they need any device that can inform them about the position of the obstacle situated ahead. In this sense white cane is the most used blind assist tool for the blind person. Also, it is a common scenario that blind people are lost and as a result their guardians and relatives are in tension and worst is that many of them are never found.

BASIC FUNCTIONALITIES

1.Object Detection

Ultrasonic range finders are used to detect the position of the obstacle and to measure the distance between the sensor and the object.

2. EyeMate for Blind Android Application

This android application is interfaced with the hardware module. This application receives the data sent by the microcontroller, If any object is detected then the application speaks in Bengali/English language to the blind person about the position of the object so that blind person can avoid collision. It also gets the latitude and longitude using the GPS available in android phone dynamically switching between the GPS provider and the Network provider. And every 5 minutes it sends the location to the server. Emergency Number is saved in the application. Blind person can establish voice call to the saved number and also control the application using his voice command in English.

3. Voice Commend

Blind person needs to give voice command in English. We have implemented the system such that blind person does not need to touch the phone to give voice command - just he/she needs to press the headset button and can give the voice command easily

TOOLS / PLATFORM, HARDWARE AND SOFTWARE REQUIREMENT

Hardware Requirements

Input Device	: Mouse, Keyboard
Output Device	: Monitor
Memory	: 4 Gb Ram (Minimum)
Processor	: Intel core i3 or above

Software Requirements

Operating System	: Windows 8 /10for Better Performance
Front End	: Python (Flask)
Back End	: MySQL
Software Used	: PyCharm
Web Browser	: Internet Explorer/Google Chrome/Firefox (for web application)