

Design of Multi Controlled Vehicle for Hampered People

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Abstract— Globally each and every organization technology is well developed and became modernized. Similarly we make some remedy for physically challenged people to travel in a smooth manner from one place to another. Our project is based on an objective to develop a modern technology vehicle for physical challenged people. The main aim of our project is to provide a remedy for the physically challenged people using sensor and image processing based techniques. This technology will also create a tremendous change in the automobile world. Here, we have developed a vehicle which can operate in three modes. The mobile application used for controlling the vehicle is Blue Terms and BT voicer. For general purpose to select the modes we have to use the BT app and for the voice control alone we have to go for the BT voicer app .If we provide a command in the app depending upon the command the vehicle gets operated. Image processing techniques helps to visualize the objects who is passing in front of the vehicle and the image is displayed inside the computer screen, so it is easy to travel without disturbances from the external agents. The vehicle is operated in electrical power hence it becomes an environmentally friendly vehicle.

Key words: Multi Controlled Vehicle, Hampered People

I. INTRODUCTION

Our project is about a modern technology vehicle for physical challenged people. The foremost aim of the project is to provide a solution for the physically challenged people to travel in a smooth manner from one place to another without any difficulty. This technology will also create a tremendous change in the automobile world. Here, the vehicle is programmed in such a manner that it can be operated in three modes Semi-automatic, Mobile controlled, Voice controlled .we can easily switch over from one mode to another mode with the help of the mobile phone provided with clear data sheet. For semi-automatic mode,Arduino is used to control the vehicle based on commands of the IR Sensors and Ultrasonic Sensors. For mobile controlled mode, we have interfaced the mobile with a Bluetooth module connected to the Arduino board and we have made use of an android app called blue terms. The command for the operation is provided through the app.For voice controlled mode we have interfaced with an android app. This technology is what makes our vehicle different from the normal vehicles. The app used here is btvoicer. For this vehicle it is provided with two DC geared motors which is connected with the help of two motor drivers L293D. When both the motor is running in same direction (i.e.) in clockwise direction the vehicle will be moving in the front and when the motors are running in the counter clockwise direction then the vehicle will be moving in the backside. Similarly, when any one of the motors is rotating in any direction then the vehicle will be moving accordingly. This

controlling of the motor driver is made through micro-controller. The motor driver helps in running the two dc motors. The motor driver is powered separately with a power bank which provides a supply of 5V.

II. PROPOSED DESIGN

A. Block Diagram

1) For Vehicle Control

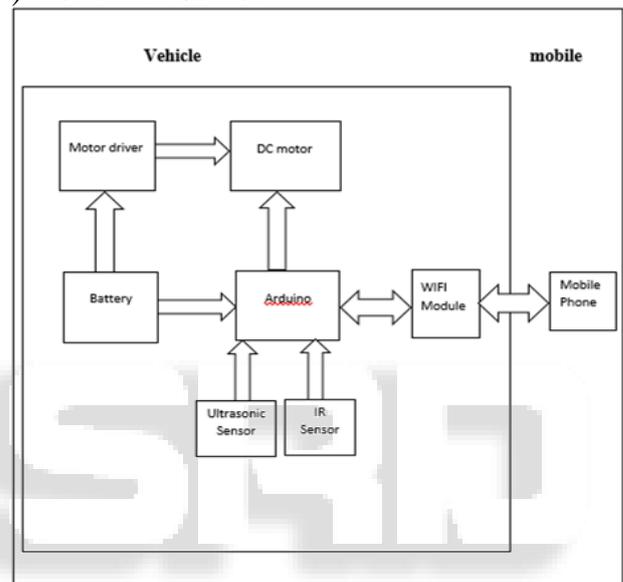


Fig. 1:

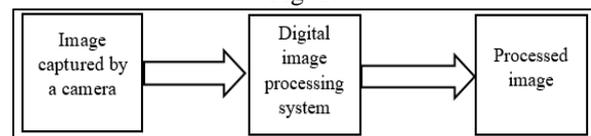


Fig. 2:



Fig. 3: Blueterm App

III. ALGORITHM

A. For Semi-Automatic Mode

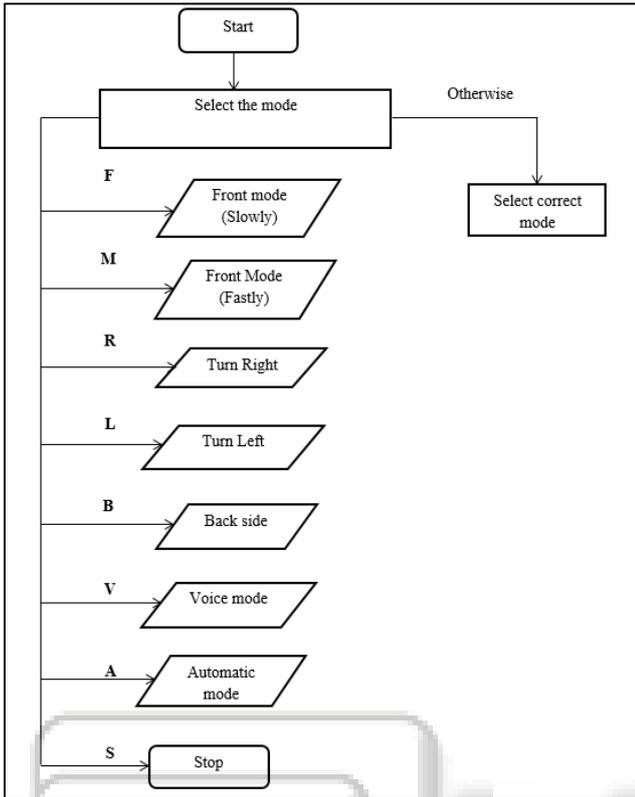


Fig. 4:

B. For Automatic Mode

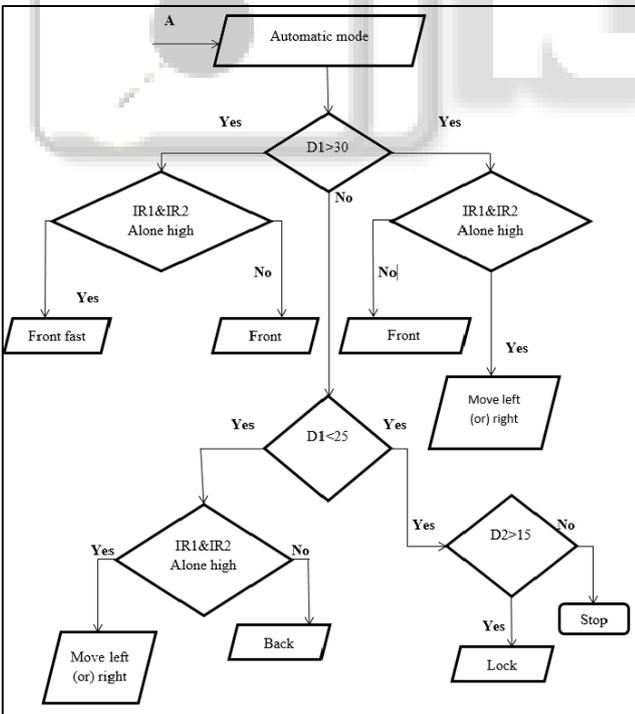


Fig. 5:

C. For Voice Mode

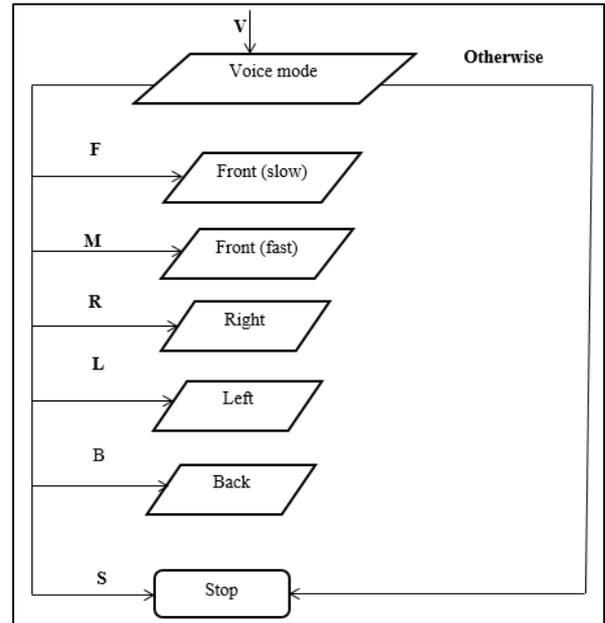


Fig. 6:

IV. RESULTS AND ANALYSIS

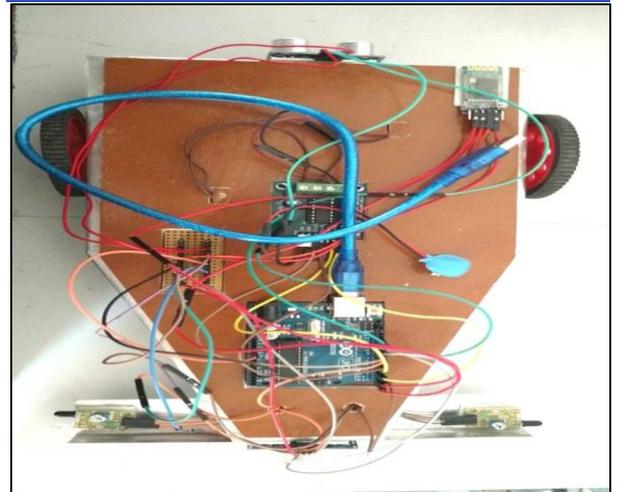
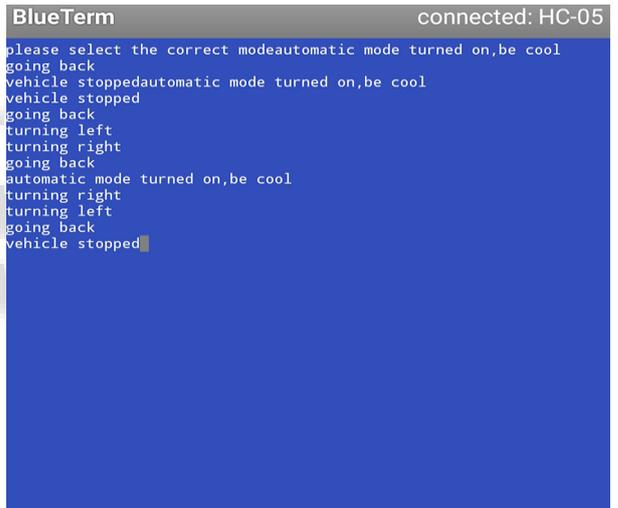


Fig. 7:

V. CONCLUSION

This project is made for aiding the physically challenged people and for bringing them the vehicle that they can drive smoothly like any other normal people in the world. It also extends to bringing the revolution in the automation with several advantages and overcoming the drawbacks in the existing model. The project is not only for the physically challenged peoples, everyone can drive this vehicle as per requirement.

This project can bring a greater revolution in the world of automobiles. This project is done mainly in focus to aid physically challenged peoples and if our project comes into the existence, those people can drive the car easily without having any kind of difficulties, because transportation is one of the major problems faced by those physically under privileged peoples. Since the cost of the vehicle is less, literally humble background people can use this vehicle. This attempt is made for the future use to create a history in the field of automation by overcoming the drawbacks in the current automated vehicle.

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