Voice Operated Intelligent Fire Extinguisher Vehicle with Water Jet Spray

Meena Kumari¹, M.E and Mrs. Shimi S.L²

¹Instrumentation and Control, NITTTR, Chandigarh
²Assistant Professor, Electrical Engineering Department, NITTTR, Chandigarh

*Corresponding Author: Meena Kumari, M.E, Instrumentation and Control, NITTTR, Chandigarh

Received Date: 09-10-2017 Accepted Date: 14-10-2017 Published Date: 16-11-2017

ABSTRACT
This paper shows the investigation and use of voice operated fire extinguisher vehicle with water jet spray. The vehicle is controlled through related talk input. The vernacular information allows a customer to team up with the robot which is unmistakable to an extensive segment of the overall public. The upsides of voice operated robots are sans hands and fast data input operations. The voice affirmation structure is set up in a way that the robot is controlled in perspective of the rule through the Speech Commands. The whole structure contains three subsystems, the discourse acknowledgment framework, transmitter range besides, the authority fragment (on vehicle). The results exhibit that proposed robot is prepared for controlling fire, sidestepping obstacles in addition, perception the significance of speech requests.

Keywords: Speech controlled robot, speech controlled fire extinguisher.

INTRODUCTION
Putting out fires and save is perceived as a dangerous mission. Fire contenders confront hazardous circumstances when quenching fires and safeguarding casualties, it is an unavoidable part of being a fire warrior. Interestingly, a robot can work independent from anyone else or be controlled from a separation, which implies that putting out fires and protect exercises could be executed without putting fire warriors at hazard by utilizing robot innovation. At the end of the day, robots diminish the requirement for flame contenders to get into unsafe circumstances. Advance, if the robots supplant or bolster fire contender in missions, the heap for flame warriors lessened. Also, one can every say only there is the breaking point of flame division control. So it is difficult to quench fire and protect numerous casualties at once in an immense debacle. For this situation, the robot innovation make conceivable to safeguard considerably more casualties. To make human lives less demanding and to make greatest utilization of time accessible [1],[2],[3],[4]

AIM OF THE WORK
*The aim of this thesis is to implement a fire extinguisher vehicle which can cause a significant reduction in the number of accidents due to fire.

OBJECTIVES AND HARDWARE MODULE OF THE WORK
The main objectives of this work are as follows:
- Construction of speech based intelligent fire extinguisher vehicle system.
- Live images feedback through wireless video camera.
- Obstacle detection capability
Voice Operated Intelligent Fire Extinguisher Vehicle with Water Jet Spray

- Night vision capability

The hardware used in the present work provides a technique which allows preventing fire accidents. This Project describes a new economical solution of robot control system. The proposed system is divided into three different sections as shown in the Fig1, Fig2 and Fig3 which is given below:[5],[6],[7]

**Part1: Regulated Power Supply**

5V Regulated power supply is used to drive the motor and also this is given to microcontroller for power supply. 7805 regulator IC is used to provide regulated power supply followed by filter circuit. It is shown in fig.1.

**Part2: Transmitter Section**

This section has speech recognition module in the input side of the microcontroller and output of the microcontroller transmits the signal with the help of RS232 interfacing device and wireless transceiver. It is shown in fig2.

**Part3: Receiver section**

This section receives the transmitted signal through wireless transceiver, and then the microcontroller takes action according to the command received. It is shown in fig3.

**METHODOLOGY, CIRCUIT DIAGRAM AND HARDWARE**

Methodology and circuit diagram are shown in fig4 and fig5. The controlling contraptions of the whole structure are micro controllers. Discourse affirmation module, remote handset modules, obstacle locator, light, water stream sprinkle, dc motors and bell are interfaced to micro controller. Right when the customer reinforced the voice summons to the speech affirmation module, the microcontroller interfaced to it examines the charge and sends material data of that request remotely using handset module. This data is gotten by the handset module on the mechanical vehicle and feeds it to microcontroller which acts in like way on motors, pump and light. The vehicle is mounted with a camera which helps in review the live pictures on TV.
The project is highly useful and is working properly. This can be successfully used in buildings etc. In future, an intelligent voice operated fire extinguishing robotic vehicle which can be developed wirelessly through RF communication can be developed.

**REFERENCES**


**Copyright:** © 2017 M. Meena Kumari, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.