

Radio Frequency Sensor for Emergency Based On Traffic Light System

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ABSTRACT

Road accidents have escalated to an unknown extent in modern urban regions. The loss of human life due to accident is to be avoided. The loss of human life due to accident is to be avoided. Traffic congestion and tidal flow are major facts that cause delay to ambulance. Modern metropolitan regions experience an unsettling surge in traffic accidents. Accidental human fatalities must be prevented. Tidal flow and traffic congestion are two significant factors that delay ambulances. We create a system called ITLS (Intelligent Traffic Light system) to prevent wrongful death accidents. The main goal of this plan is to minimise delays brought on by traffic congestion by facilitating a fluid flow for emergency vehicles, such as ambulances, to arrive at hospitals on time. The purpose of this plan is to implement ITLS, which would mechanically control the traffic lights along the ambulance's path.

I. INTRODUCTION

In a recent study, Serafati et al. (2017) looked into whether the frequency of persons dying in traffic accidents varied between urban and rural areas. This variation in death toll is brought on by emergency services' response times. Their findings suggested that reducing the disparity in access to healthcare services between urban and rural areas could help to reduce the high prevalence of fatal accidents. The National Highway Traffic Safety Administration (NHTSA) and other organisations that promote road safety Serafati et al. (2017) examined whether there were differences between urban and rural locations in the frequency of fatal traffic accidents. The varying reaction times of emergency services are to blame for this difference in the mortality toll. According to their research, the high frequency of fatal accidents could be decreased by reducing the discrepancy in access to healthcare services between urban and rural locations. Road safety is promoted by the National Highway Traffic Safety Administration (NHTSA) and other organisations.

II. RELATED WORK

We propose an intelligent traffic management and control system. The system comprises the vehicle LED head and tail lights, the sending end of the control LED lights, the photoelectric or image sensor of the vehicle, and the control station as the receiving end. The vehicle and the control station communicate through the light. The LED lights of a vehicle and control station are equipped with an embedded VLC module. The vehicle communicates with the control station by visible light firstly, and then the control station communicates with the control center through cable or optical fiber.

This variation in the death rate is due to the emergency services' various response times. Their study found that lowering the disparity in access to healthcare services between urban and rural areas could reduce the high frequency of fatal accidents. The Road safety is promoted by the National Highway Traffic Safety Administration (NHTSA) and other organisations. The station communicates with the control centre through cable or optical fibre. In today's society, the problem of traffic congestion is only getting worse. The population and the number of cars are both rising steadily. The uneven distribution of development and the inadequate infrastructure are the root causes of many problems. Reduced travel times and traffic jams are especially important in developing countries, hence intelligent traffic light signals are required.. Due to the manual or fixed timing techniques used in modern traffic systems. Therefore, we require efficient and reliable traffic handling

D. Working

The envisaged systems are located in various parts of the mine. The Lua version of the Node.js programming model is used by N.odeMCU. It is driven by events and asynchronous. As a result, many functions provide parameters for callback functions. A satellite-based navigation system that delivers position and timing data is the Global Positioning System (GPS). Anyone having a GPS receiver and a clear line of sight to at least four GPS satellites is free to use the system. A GPS receiver pinpoints its location by precisely timing the signals transmitted by GPS satellites. GPS is now widely used and has been included into smartphones. A display is made up of millions of pixels. The phrase “display quality” typically refers to the quantity The quantity of pixels on a display is frequently used to describe its quality; for instance, a 4K display has pixels that measure 3840 x 2160 or 4096 x 2160. A buzzer alarm is a device that emits sound and can switch between producing different sound signals. Typically, it is used in alarms and PCs

IV. RESULTS AND DISCUSSION

Our idea includes smooth flow cars, VIP vehicles, and fire ambulances that travel more quickly to their destinations. Through the vehicle's sensor systems, which identified the accident, the controller locates the accident area, and he or she then enters the ambulance to get there. In our nation, we require a very affordable and effective management system. We must lessen traffic jams and congestion as a result of population growth in order to decrease crashes on the roads. The buzzer's ON/OFF status is controlled by the microcontroller's output. The received outputs from the mine worker and the mining environment are updated on a regular basis in the IoT portal. If the readings surpass the threshold, the buzzer will sound. Before delivering sensor data to a website, IoT acts as the system controller, gathering and analysing all data. The Internet of Things (IoT), which acts more quickly after receiving data, updates the sensors automatically and notifies the coal mine staff. It also saves them a lot of time and safeguards their mining from any unintended losses. Mnemonic words are mapped into the binary machine codes that the processor utilises to encode the instructions using assembly language. It might seem obvious to use assembly language to programme embedded hardware. The usage of assembly language is only permitted for creating small and quick scripts, though.

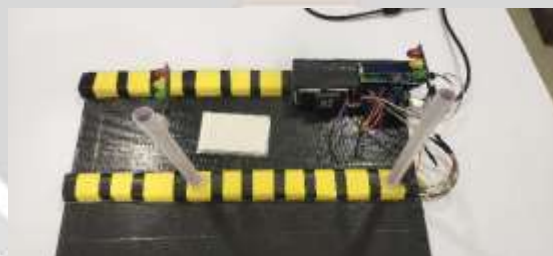


Figure 3 Prototype

V. CONCLUSION

The suggested system focuses on accident detection. However, if you give the accident victims medicine right away, this can take longer. By developing alarm systems that can stop the car in order to prevent accidents, we can also prevent accidents as technology advances. A GPS receiver is now an essential component of a car. In addition to its numerous uses, the GPS can track speed and spot accidents. By activating the Manual Detection Switch in addition to the automatic detection system, the occupant of the vehicle can manually send the accident situation. Many lives can be saved by taking rescue action in the right location and at the right time with enough planning. As a result, the proposed approach can greatly benefit humanity. As a result, the proposed approach can greatly benefit humanity because human life is valuable.

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