

Accident alert system using Iot

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ABSTRACT

Vehicle to vehicle correspondence is a kind of communication which gives communication among close by vehicles for enhancing and diminishing activity issues. Presently a days movement blockage is the principle issue of any individual and it prompts street mishances of thousands of individuals and taking their lifes every year as per late study there is one demise like clockwork because of street mishaps in india. With a specific end goal to defeat this issue we have planned a framework called "Accident alert system using vehicle to vehicle innovation ". This framework chiefly center around decreasing the rate of street mishaps by sending an alert message to the over heading vehicles

Keywords: *Vehicle to vehicle, Enhancing, Blockage, Street Mishaps, Framework*

INTRODUCTION

The Internet of Things is a registering idea that depicts the possibility of consistently physical items being associated with the web and having the capacity to distinguish themselves to different gadgets. The IoT refers to a system which includes physical items equipped for social event and sharing electronic data. The IoT incorporates a wide variety of intelligent gadgets which distinguishes PCs over the internet and enables them to speak with each other. The objective behind the IoT is to have gadgets that self-report continuously enhancing effectiveness and conveying critical data to the surface more rapidly than a structure depending upon human intercession

As the quantity of populace is expanded in the metropolitan urban communities the need of vehicles likewise got expanded which thus brings about street mishances, driver frustration, air contamination and commotion contamination. Street mishances have turned into the primary driver of ethical quality.

The accident alert system that we propose is implemented using a mobile application that is connected to the cloud. This system helps the driver receive an alert message regarding the collision that has already occurred. This is done through vehicle to vehicle communication technology. The communication occurs in two ways one between vehicles and the other between the vehicle and the infrastructure.

II.RELATED WORK

2.1 Inter Vehicular Communication System

This paper primarily center around the bury vehicular correspondence strategy. The primary objective of entomb vehicular correspondence is to overhaul on board gadgets and along these lines to expand the skyline of drivers. The vehicular impact cautioning correspondence convention displayed in this paper proposes a contrasting option to enhance street security

2.2 Vehicle to Vehicle Communication using RFID along which GPS and WAP

This paper for the most part revolve around a vehicular uncommonly delegated framework development that usages more vehicles as centers in a framework to make a framework. The primary target this is to transform each taking part vehicle into a remote switch or hub, permitting vehicles around 100 to 300 meters of each other to interface and thus, make a system with go.

2.3 Vehicle to Vehicle communication:Traffic Safety Over RF Communication

This paper proposes an innovation to enhance activity clog and street safety.They have investigated circumstance like collision, delay and redundancy which can be enhanced or overwhelmed with straightforward cautioning message transmission/GPS is utilized so vehicle to vehicle framework processor can recognize the speed,direction and area of the vehicles.

2.4 Accident Alert Using IoT

In our project we are making use of two keys one is known as the press key and other is known as the emergency key.As soon as the vehicle is met with an accident the press key is pressed and automatically an alert message is send to overheading vehicles.

III.PROPOSED WORK

A development to upgrade movement obstruct and road safety.They have examined condition like collision,delay and redundancy,which can be improved or overpowered with direct forewarning message transmission GPS is used so vehicle to vehicle structure processor can perceive the speed,direction and region of the vehicles.

1.1. BLOCK DIAGRAM

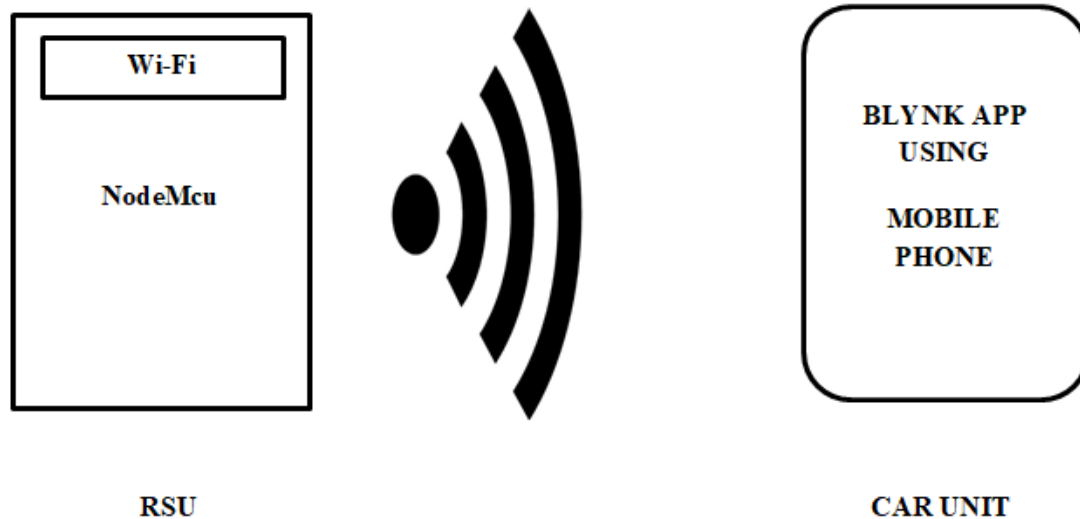


Fig 1 :Block diagram of the complete system

1.2. DISCRPTION

The fig1 represents the entire block diagram of the system. This system mainly consists of NodeMcu, pressure sensors and a mobile application called Blynk application. The pressure sensors is placed in the vehicle and it is considered as a press key. As soon as the vehicle is met with an accident the press key will be pressed and through Wi-Fi module an alert message is been passed on to the over heading vehicles present at particular distance mentioned. In this system communication happens in two ways one is vehicle to vehicle communication and other one in vehicle to infrastructure communication. Another key known as emergency key will be in drivers mobile application. Any time when driver feel he is unsafe or in some emergency then he can send an alert message to the other vehicles and avoid road accident. The main advantage of this system is to avoid the road accident and traffic congestion.

1.3. FLOWCHART

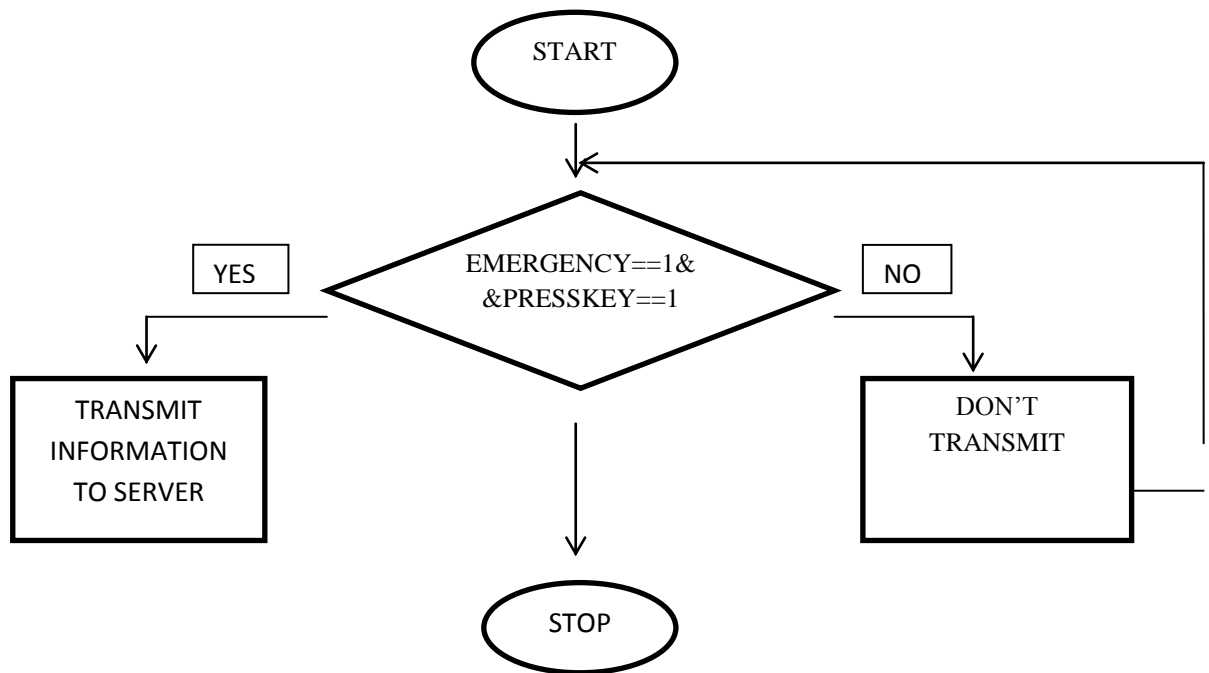


Fig 2: Flowchart of the overall system

IV.EXPERIMENTAL RESULTS

The delayed consequences of proposed structure are for all goals and proposes actualized. Consequences of the arranged system are associate beneath



Fig 3: Expected output in the Blynk application

V.CONCLUSION

The possibility of splendid urban zones have reliably been a dream for humankind .The development of web of things and cloud advances have offer ascent to new conceivable outcomes as far as keen urban areas .Intelligent activity administration framework have dependably been at the center of building intelligent urban

communities. This designed “accident alert system using iot” which is straight forward, monetary and gives powerful solution to lessen the mischances occurred in the urban areas by enhancing the movement administration framework and human wellbeing.

REFERENCES

- [1] Daniel Lopez Garcia Danckelmannstrasse 46/47 Berlin “*Inter Vehicular Communication System*”.
- [2] Vaishali D. Khairnar, Dr.Ketan Kotecha “*Performance of Vehicle to Vehicle Communication using IEEE 802.111p in Vehicular Ad-hoc Network Environment*”, Vol.5, No.2, March 2013.
- [3] Aarti Chauhan, Nidhi Sharma “*Vehicle to Vehicle Communication: Traffic Safety Over RF Communication*”, ISSN:2321-3418, Vol 3, issue 5, pp 2769-2772, 2015
- [4] Ana Roxin “*Inter-Vehicle Communication Research Report*”, HAL archives, 2014.