

# VEHICLE COLLISION AVOIDANCE SYSTEM

P.Padmavathi<sup>1</sup>

<sup>1</sup>Department of Electronics and communication engineering,

Murugappa Polytechnic college, Chennai-62.

E-mail id: [padmavathympt@gmail.com](mailto:padmavathympt@gmail.com)

## Abstract

To maintain a strategic distance from collision between two vehicles this framework has been planned. This comprise controller with Lora and GPS module. The GPS issued to get to the area of vehicle and Lora is utilized convey between two vehicles. The significance of autonomous or semi-autonomous vehicles for intelligent transport systems (ITS) is expanding. V2V technologies are easy to execute principally due to their dependence on wireless communication.

Keywords: Vehicle, collision, V2V, ITS, automation.

## 1. INTRODUCTION

Having low power and data rate, ESP8266 turns out to be used extensively in V2V communication [1]. In this paper, recommendations are started towards improving street wellbeing and dealing with traffic congestion. In past technique the framework is planned with the assistance of Bluetooth module. As the Bluetooth module works under low range and furthermore hard to combine the data transmission starting with one vehicle then onto the next vehicle was difficult [2]. The proposed method is designed with the help of GPS and Lora. Lora provides better performance while compared to Bluetooth. This system can easily prevent collision by alerting the second driver. An ultrasonic sensor is

embedded with each vehicle to detect any obstacle. This information will be shared with every nearby vehicle [3].

## 2. Methodology:

Global Positioning System - GPS is a satellite navigation system used to determine the ground position of an object. GPS technology was first used by the United States military during the 1960s and ventured into regular citizen use over the next few many years. Today, GPS recipients are remembered for some business items, such as autos, cell phones, practice watches, and GIS gadgets. The GPS system includes 24 satellites conveyed in space around 12,000 miles (19,300kilometer) abovetheearth'ssurface.Theyorbittheearthonceevery12hoursatanextremelyfastpaceof about 7,000 miles each hour (11,200kilometer each hour).

The satellites are evenly spread out with the goal that four satellites are available by means of direct line-of-sight from anywhere on the globe. Every GPS satellite broadcasts a message that incorporates the satellite's current position, orbit, and specific time. A GPS recipient joins the broadcasts from multiple satellites to compute its accurate position utilizing a cycle called triangulation. Three satellites are needed to decide a collector's area, however a connection to four satellites is ideal since it provides greater accuracy. The figure.1 show the execution of collision avoidance system.

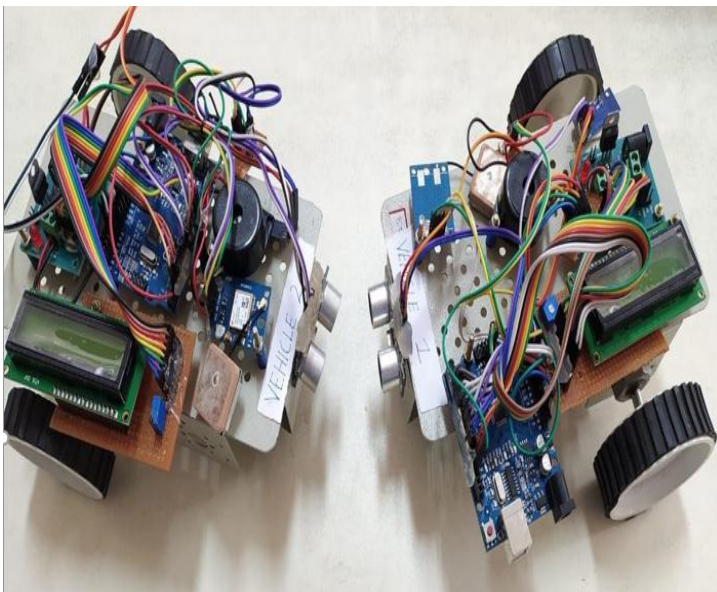


Figure 1: Implementation of collision avoidance system.

## 2. CONCLUSION

In this manner our project purpose is to avoid collision and to provide smart city transportation. This project propose an effective, efficient and stable broadcast authentication plan to give vehicle wellbeing

like impacting driver behaviour, improving street security, decreasing traffic congestions and it is not difficult to execute in real time.

## REFERENCE

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