EMERGENCY VEHICLE PRIORITY BASED SYSTEM

A Thesis

Submitted

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In

Computer Science & Engineering

Submitted by:

Sarfraz Ahmad

Enroll No: 1800104043
Roll No: 1801622007

Under the Supervision of:

K.C. Maurya

(Assistant Professor)

Department of Computer Science and Engineering

Faculty of Engineering

INTEGRAL UNIVERSITY, LUCKNOW U.P, INDIA

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CERTIFICATE

This is to certify that **Mr. Sarfraz Ahmad** (Enroll No. 1800104043) has carried out the research work presented in the dissertation titled "**Emergency Vehicle Priority Based System**" submitted for partial fulfillment for the award of the **Master of Technology in Computer Science and Engineering from Integral University, Lucknow** under my supervision.

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Mr. K. C. Maurya
Dissertation Guide
(Assistant Professor)
Department of CSE,
Integral University, Lucknow

Date: 09/08/2021
Place: Lucknow

DECLARATION BY STUDENT

I, **Sarfraz Ahmad**, hereby declare that the work presented herein is original work done by me and has not been published or submitted elsewhere for the requirement of a degree programme. Any literature date or work done by other and cited within this thesis has given due acknowledgement and listed in the reference section.

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On the basis of the declaration submitted by "**SARFRAZ AHMAD**", a student of M.Tech CSE (Evening), successful completion of Pre presentation on 09-08-2021 and the certificate issued by the supervisor

K. C. Maurya (Assistant Professor) Computer Science and Engineering Department, Integral University, the work entitled "**Emergency Vehicle Priority Based System**", submitted to department of CSE, in partial fulfillment of the requirement for award of the degree of Master of Technology in Computer Science & Engineering, is recommended for examination.

Program Coordinator Signature
Dr. Faiyaz Ahmad
Dept. of Computer Science & Engineering

Date:___________

HOD Signature
Dr. M Akheela Khanam
Dept. of Computer
Science & Engineering
Date: ________________

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SARFRAZ AHMAD

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List of abbreviations

AI: Artificial Intelligence

IR: Infrared

LED: Light-Emitted Diode

RFID: Radio Frequency Identification

TMC: Traffic Management Control

DB: Data Base

GPIO: General Purpose Input Output

I/O: Input Output

USB: Universal Serial Bus

GND: Ground Signal System

RSU: Remote Switching Unit

ARM: Advanced RISC Machine

MU: Memory Unit

TCM: Transmission Control Module

TCU: Transmission Control Unit

ABSTRACT

Every country's vehicular traffic is increasing, growing, and there is terrible traffic congestion at intersections. In the current case, most traffic lights have a fixed light sequence, so green light sequence is to determine with-out taking priority vehicles into account.

As a result, priority crews such as police cars, ambulances, fire engines are still unable to perform, get stuck in traffic and come in late, which can result in the loss of valuable property and life, which does happen on occasion. The green light sequence is evaluated given the current state of traffic, without taking into account the existence of emergency vehicles.

Our aim to this paper is to present a mechanism for scheduling emergency vehicles. It is provided to important such as access control protocol to convey emergency vehicle information to the Traffic Management Center (TMC) with time delay and to all alerts while using GPS techniques for acquiring emergency vehicle information. Only then is the emergency vehicle quickly dispatched, and the destination is reached on time. It would be helpful in the future for the prominence of casual vehicles.

CHAPTER 1
INTRODUCTION

In every intelligent traffic management system, traffic light control is critical. In traffic light monitoring, the sequence of green lights and the length of green lights are the two most significant variables to consider. Most traffic lights in many countries include fixed light sequence and light time duration. Priority crews methods, but at the other hand, are suitable for secure or normal traffic, not for dynamic traffic. In the present state of operation, the sequence of green light is established with-out taking into account the possibility of the presence for emergency priority vehicle. As a response, emergency vehicles such as, police cars, fire trucks, ambulances and other types of emergency vehicles wait in traffic points at intersection, avoiding their arrivals at particular result and destination in the loss of life and property. Ireland, an average of 700 fatalities was noted every year due to come late ambulance vehicle responses [1].

Mostly researcher have built pre-emption systems that measure the signal time based on the specific distance in between emergency vehicle and intersection. Our present a new and unique approach for calculating distance in between an emergency vehicle and an intersection use a real time data feed from intersection sender response in this paper. Our aim is to install another lighting in addition to the green light, in which we are proposing a new blue light to them without disturbing the traffic rules and their control system.

Figure 1: EVPS Ambulance stuck in Jam

Through this, when this emergency vehicle has to be removed from traffic, only this new blue light will be used. To target emergency vehicles, a range of traffic control systems have been introduced [4]. The maximum part of this research has been based on the design of an intelligent traffic control system to provide vehicle evacuation systems in the event of an emergency (5),(6),(7).

According to the research of EVPS, many solutions have been proposed for the arrival and departure of accidental vehicles in the event of traffic jams at intersections. The solutions for removing vehicular obstructions at traffic intersections are divided into a separate category, giving priority. In this case, the first thing to do is to specify its destination using the Location Application, which will automatically communicate its actual location to the GPS system. For example, a navigation system chooses a route as the solution, whose position is passed to the system. So that to arrive at its destination, the accidental vehicle must face the blue light and exit the intersection safely. [5]. This solution will work on the list of routes based on the navigation system received by Google. In which, considering the selection of shorter distance or longer distance, the selection of the route will be decided on the driver.

Our main objective is to make the vehicle work on arrival and departure from traffic intersections without getting stuck in a jam, which is to work on mutual consent of the application and traffic management.

This solution will work on the list of routes based on the navigation system received by Google. In which, considering the selection of shorter distance or longer distance, the selection of the route will be decided on the driver.

Our main objective is to make the vehicle work on arrival and departure from traffic intersections without getting stuck in a jam, which is to work on mutual consent of the application and traffic management.

The second category is also proficient in creating these solutions through this application, which will be based on interacting with the traffic management staff for traffic control. In the same category, a smart traffic management system [6], [9] is for prioritizing the vehicle by controlling the crowd.

The existing solution proposed for the system would be easy for the driver/user to be based on a single primarily real-time application, which would be fully automated and dynamic. However, the feasibility of these solutions, the costs involved, the

Limited due to potential breach of device and user privacy.

CHAPTER 2
BACKGROUND

(GPS) Global Positioning System is a space/cloud based satellite navigation system. It gives all the environmental conditions in one place and also shows the traffic conditions on the road. This technology is based on social networking, wherever the driver is, GPS tells its real location.

The function of GPS is to help identify two or more satellites and measure their distance and calculate their actual position using the information received. The term microcontroller usually refers to a complete system consisting of three main components: first, it operates purely on the basis of an operating system, allowing any real operation to be implemented from the system it receives. Second, it can be used with any system using the technology, with which the storage of data and applications can also be configured. Raspberry Pi is a type of operating system or it can also be called micro electronic device, using which any real work can be done by the operation of a new program through some technology.

2.1 Objectives and Limitation of the Study

2.1.1 Objectives

Depending on the application, the GPS will usually be able to take some type of data and generate a map between those two locations. To find out the actual presence of the vehicle we use GPS, which is known as a sort of interrogator.

2.2 Limitation of the study

2.2.1 Priority Basis

A great deal of research has gone into determining whether to use traffic data in a good way to assess green light sequences, and control the number of transport vehicles at traffic points. An innovative series of traffic control systems have been introduced for accidental prioritization of vehicles in the event of an emergency [4]. Much of this research is based on intelligent traffic control system architecture to provide emergency vehicle evacuation [5–9]. Cameras are used to calculate traffic conditions, and the edges between lanes are used to estimate traffic parameters. [10] [11].

2.2.2 Smart Traffic Protocol

Light emitter like LED, is used in traffic control systems to detect the issues such as blocked lines of vision and unnecessary traffic noise [12]. (IR) Infrared and (GPS) Technologies like the Global Positioning System have been used by us to track emergency vehicle presence and to measure the density of traffic in real-time.[13] The inductive loop approach has been used to count vehicles at traffic points and RFID has been used to check for the presence of emergency vehicles.[14] Radar detection, Video based tracking system, ultrasonic detection and other types of traffic detection are commonly used.

2.2.3 Proposed in Real-time

As the number of vehicles on the road is increasing in the future time, traffic congestion and transportation delays occur in many countries around the world. Fire trucks, ambulances and police jeep example, should be able to respond to urgent/emergency call as quickly as possible. The quality of an emergency response is determined by how quickly emergency vehicles can arrive at the scene of an incident. If an emergency vehicle becomes trapped in traffic and takes longer to arrive at the scene of the crash, lives and property can be lost. According to the future times, density based smart traffic system is needed keeping in mind the priority and traffic to make the transportation efficiency and emergency action timely.

CHAPTER 3
PROPOSED METHODOLOGY

3.1 Study Area Description

To get rid of this problem and for the convenience of the public, this technical system can be used. Which will give priority to accidental vehicles in the coming time. This system at the traffic signal will help the accidental vehicles to reach their destination.

1. As the driver uses this application, his actual location will be known, where the driver will receive the patient, and as soon as he determines where he needs to go, a map between the two locations of the sender and the receiver will be displayed via GPS.
2. It will be displayed on the mobile screen by the registered number of the driver along with the image.
3. This data which will be received from sender and receiver will be stored in Database (Fire base).
4. According to the received map, both the locations (generated between sender and receiver) will be received by an API to the microcontroller i.e. Raspberry Pi.
5. The received data will be sent to the TMC under a notification, which will forward the traffic point, to be passed through the microcontroller i.e. Raspberry Pi.
6. According to this system, any accidental vehicle (ambulance, fire, police or others) will pass through the traffic point to register itself. Only then will the data be transferred to TMC through cloud storage. After approaching Data TMC, he orders the vehicle to reach its destination by sending the data to the vehicle, traffic point according to the data received through GPS, the vehicle's position.
7. The State shall, pursuant to this State Notification, turn on sirens with blue lights at traffic point intersections, so that accidental vehicles may pass through that intersection without being caught in traffic.
8. Whatever time the vehicle takes to reach its destination and the data received, that data will

be stored for future use.

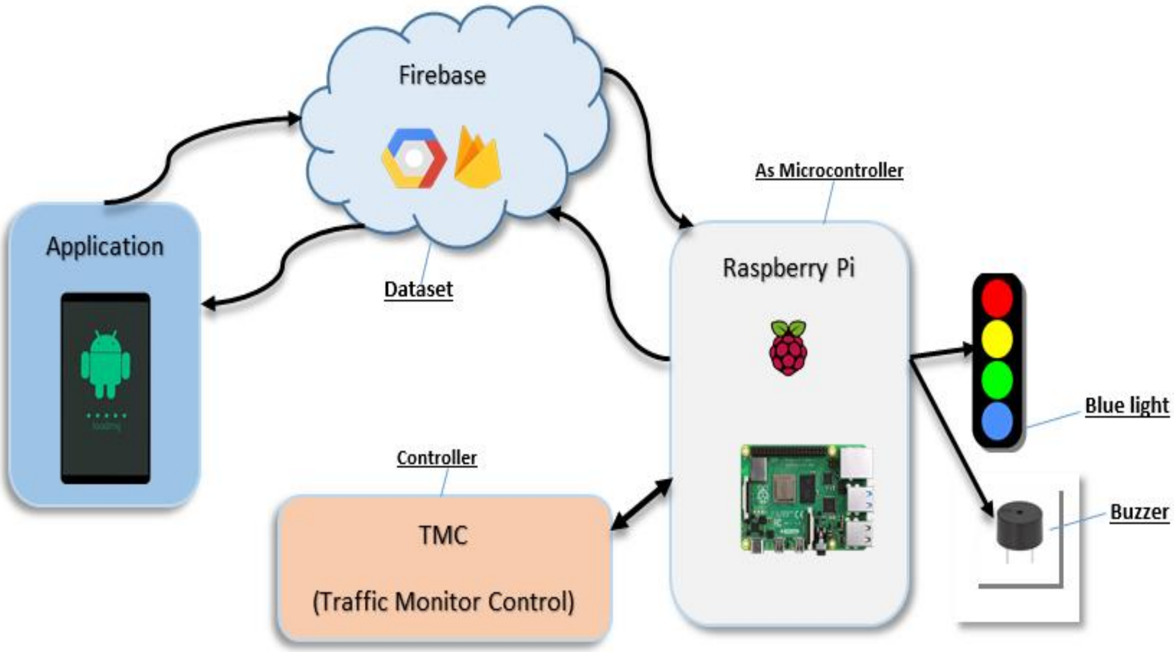


Figure 2: EVPS Architecture Image

3.2 Work Process

The proposed two units are included on this basis. Namely:

1. **Application unit**
2. **Junction unit (Traffic Signal Point)**

3.2.1 APPLICATION UNIT:

- A GPS receiver and a transceiver that works in agreement with a micro-controller and creates a vehicle unit, which will be shared with the vehicle's driver's mobile device.
- This application will be helpful in working in data control of the driver and TMC. Its basic purpose would be to allow casual vehicles to proceed without stopping at intersections with traffic points through signals. This signal will

inform the TMC about the oncoming vehicle through notification. TMC can send signal by receiving notification which it will be able to automate the traffic light at the signal.

- The application will generate a map of the receiving location and the destination to be taken, which will act as an index to the driver.

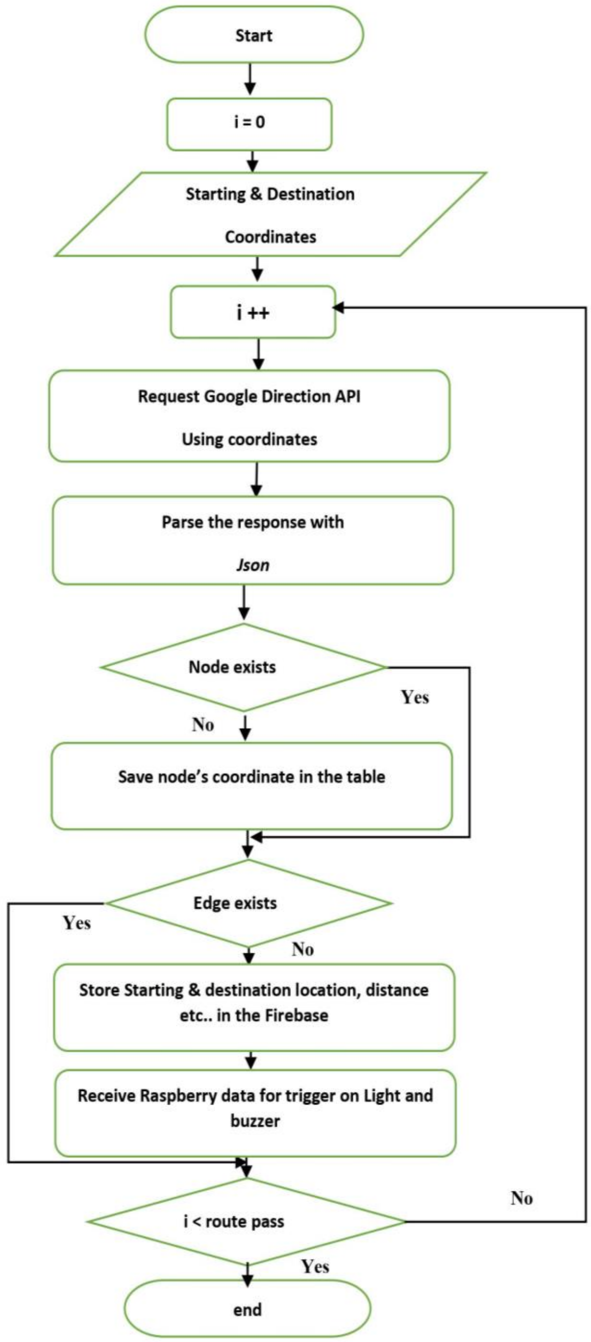


Figure 3: Application work Flow

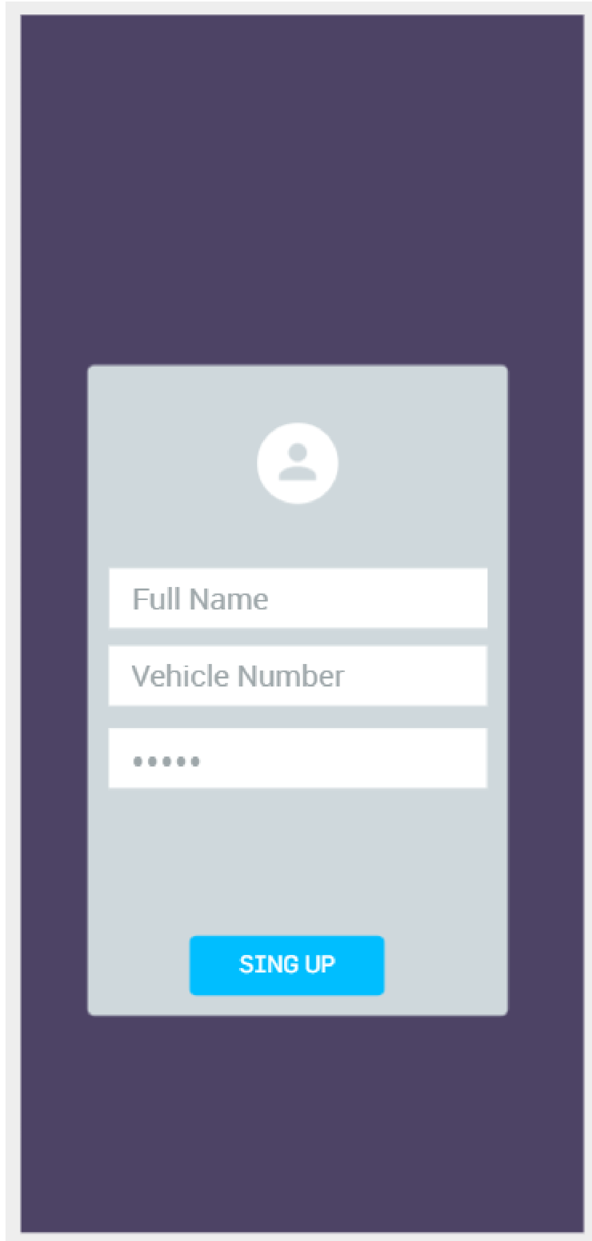


Figure 4: User/Driver Registration Image

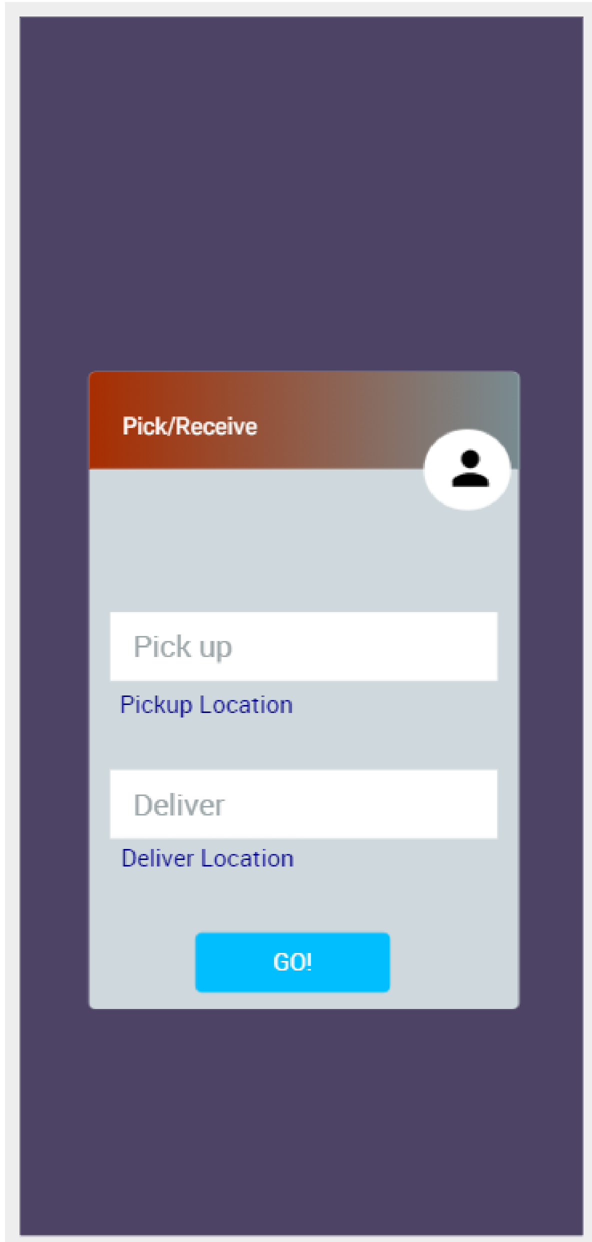


Figure 5: Location Receive & Deliver Image

3.2.1.1 Components Using:

- Microcontroller: Raspberry Pi,
- Data Base (Firebase)
- Application

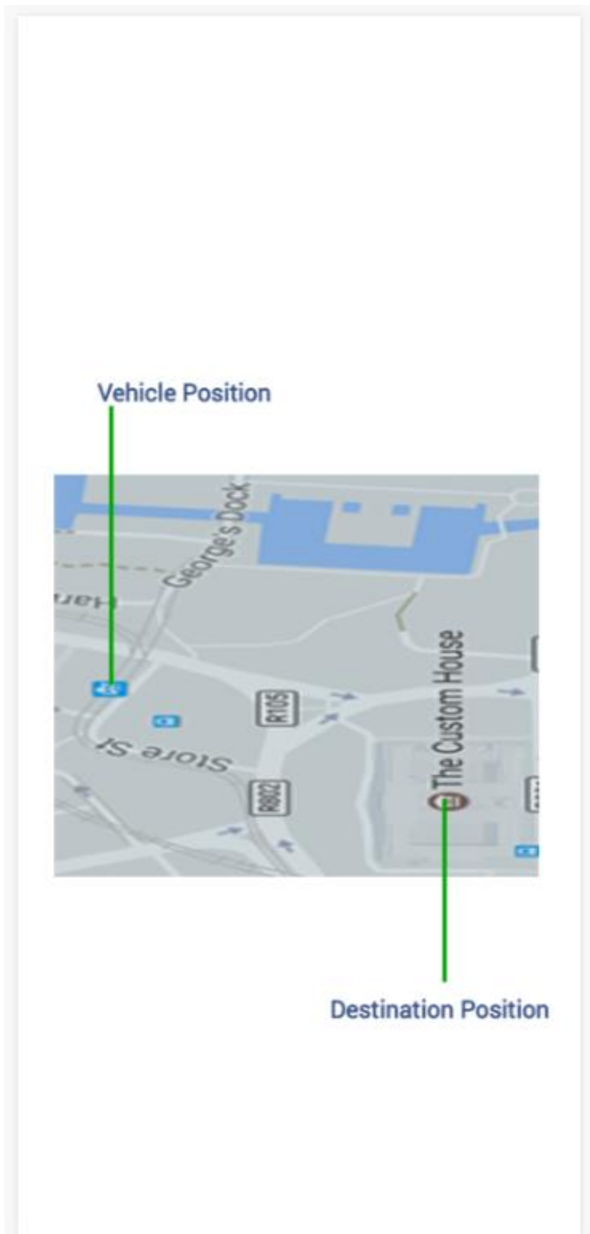


Figure 6: Map Sender & Receiver Image

3.2.1.2 Communicate Firebase(Db) to Raspberry-pi

The Firebase Real-time Database is a cloud-hosted database. Data is stored as JSON and synchronized in real-time to every connected client. If you want to know more check out.

First things first, you need to create a new project in your console.

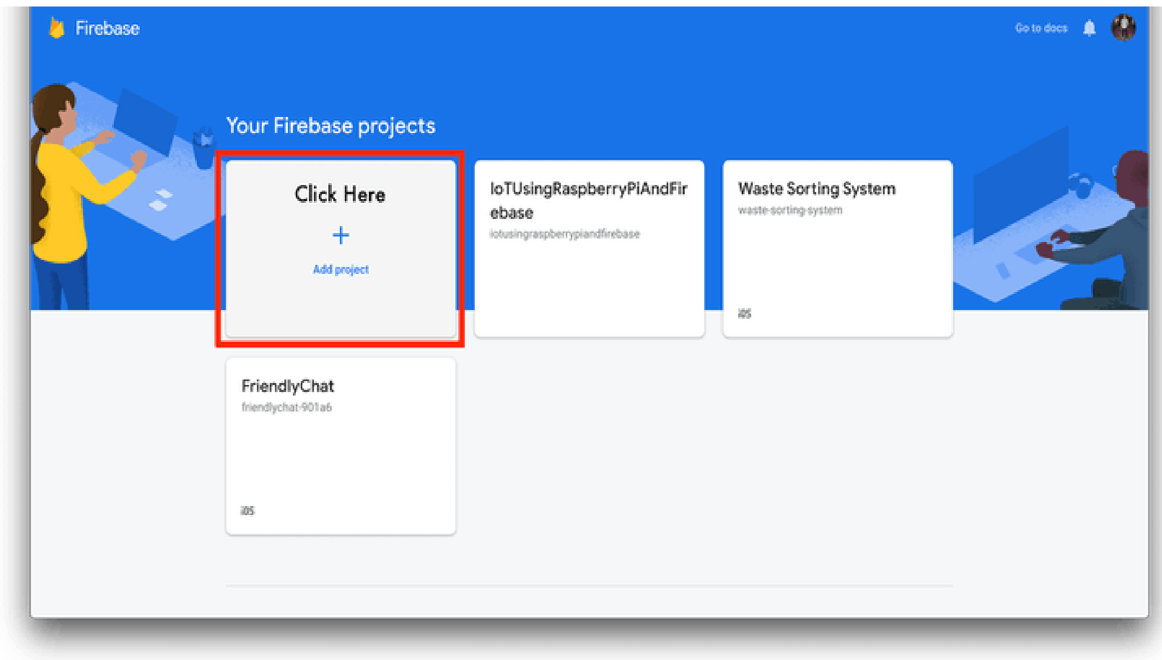


Figure 7: Create Database in Firebase

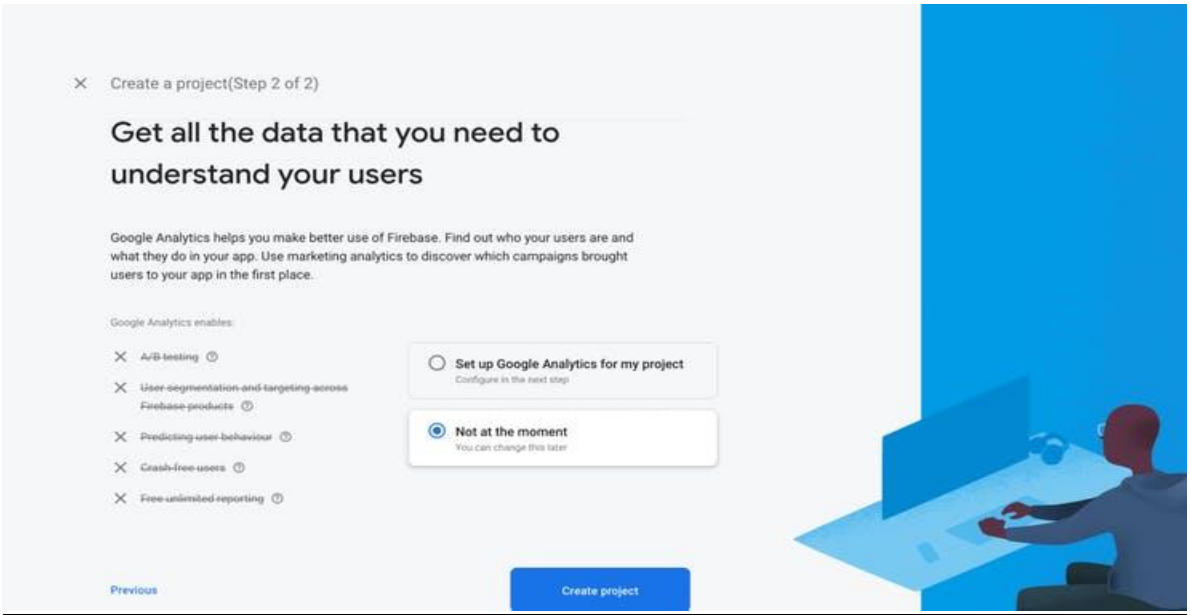


Figure 8: Permission in Firebase

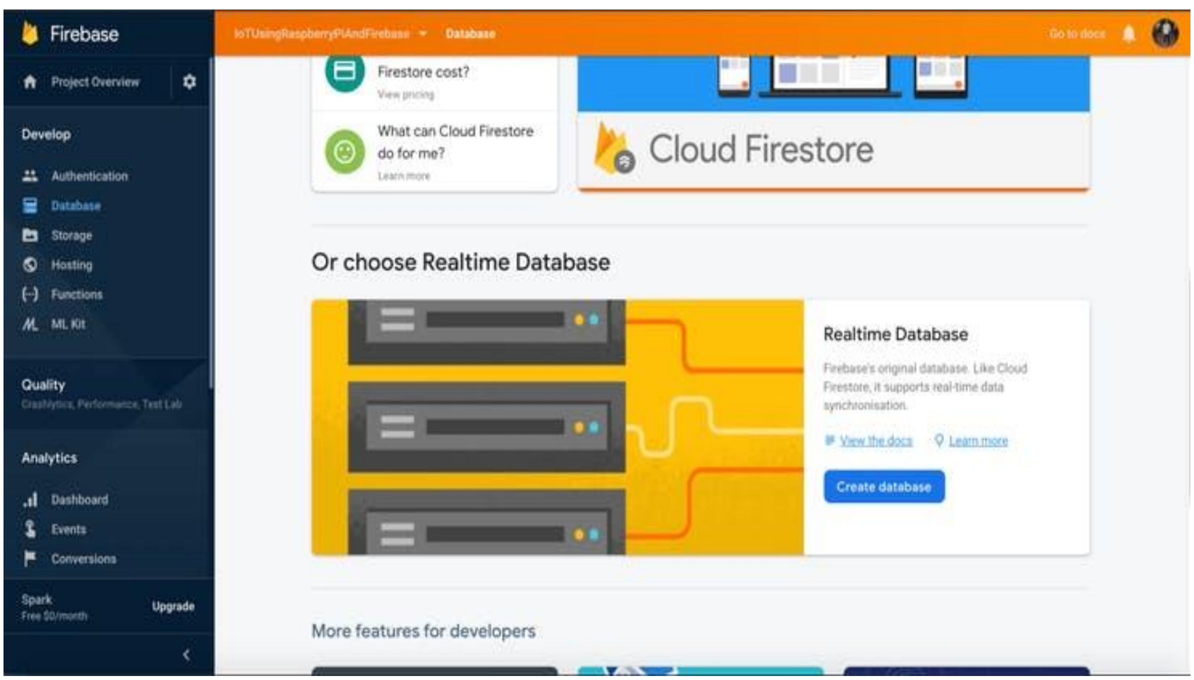


Figure 9: Access Real-time Database in Firebase

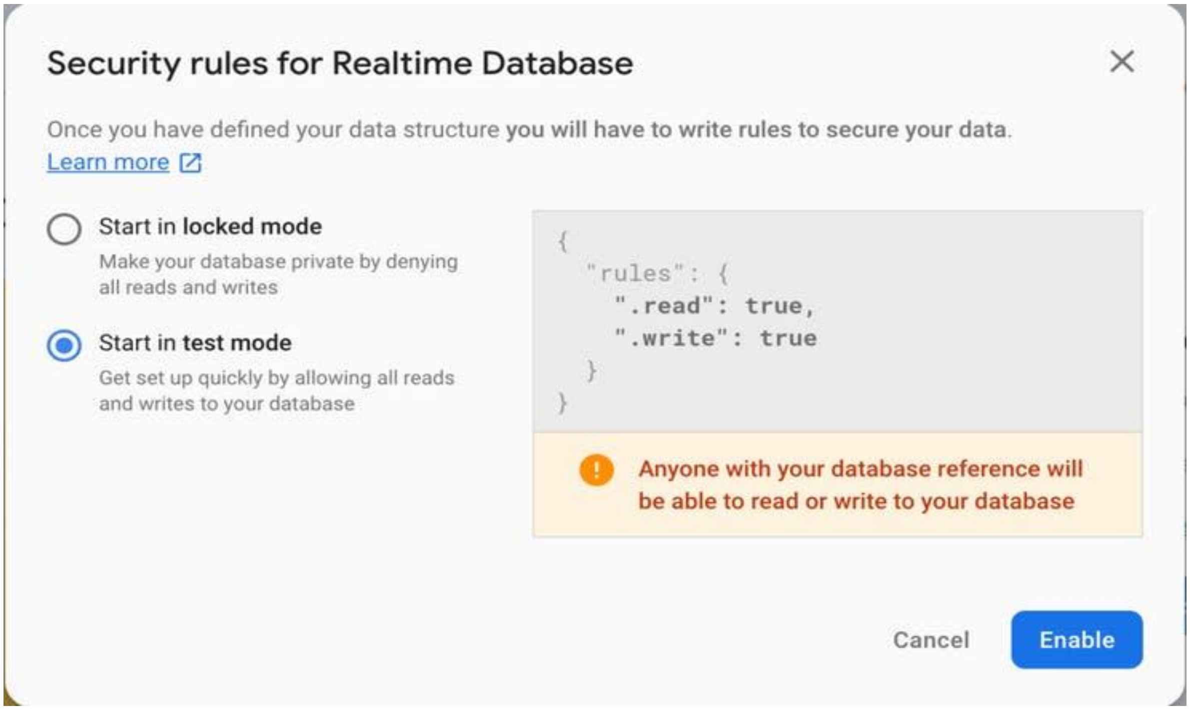


Figure 10: Security for Real-time Database in Firebase

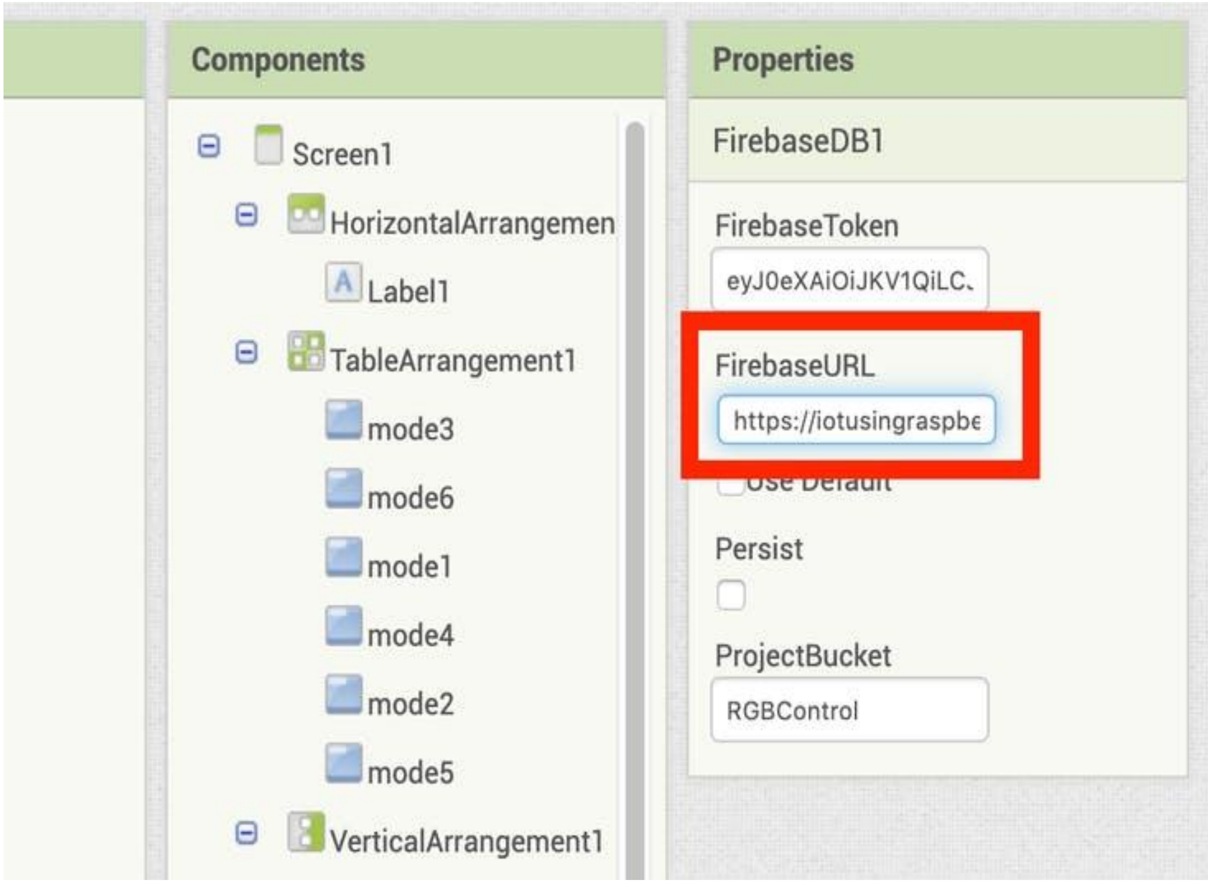


Figure 11: Real-time access data to monitor url for TMC

Figure 12: Data Transfer user location to Raspberry pi

3.2.2 JUNCTION UNIT

The interceptor with a microcontroller creates a transceiver called the junction box, which will be present at the post of the traffic signal. The transceiver will receive the GPS coordinates transmitted by the vehicle unit. The junction box's microcontroller software approves the given coordinates of a point at a certain distance, turning the traffic signal blue when it is being traversed by the vehicle. Simultaneously, the LED screen displays a message that the accidental vehicle is approaching, indicating that other drivers must be informed of an oncoming accidental vehicle from a buzzer at the traffic point. The vehicle's destination of arrival may vary depending on the traffic landscape at each junction and can be programmed accordingly, giving the green light enough time to remain green before ambulances pass through the intersection. So according to this case the buzzer starts ringing moments before the vehicle arrives, by informing the emergency vehicle through TMC at the approaching intersection. Accordingly, an incoming emergency vehicle such as an ambulance may be present in more than one lane of the intersection.

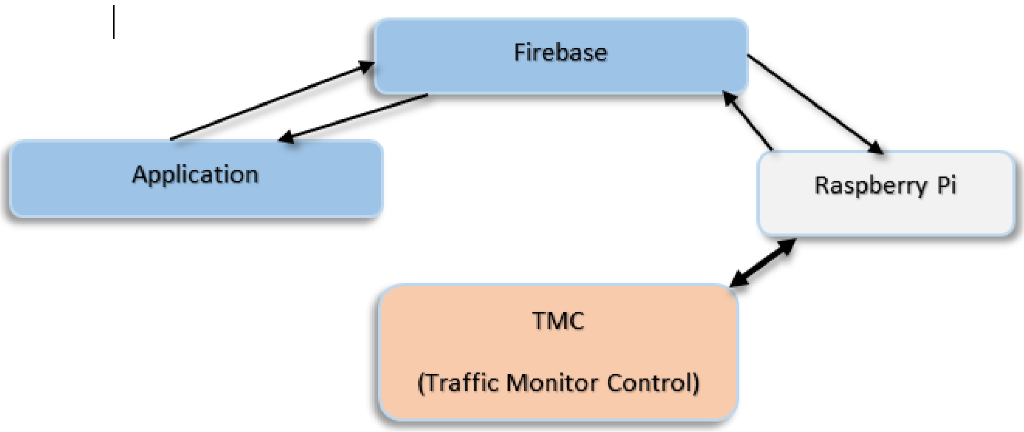


Figure 13: EVPS DFD (0 Level)

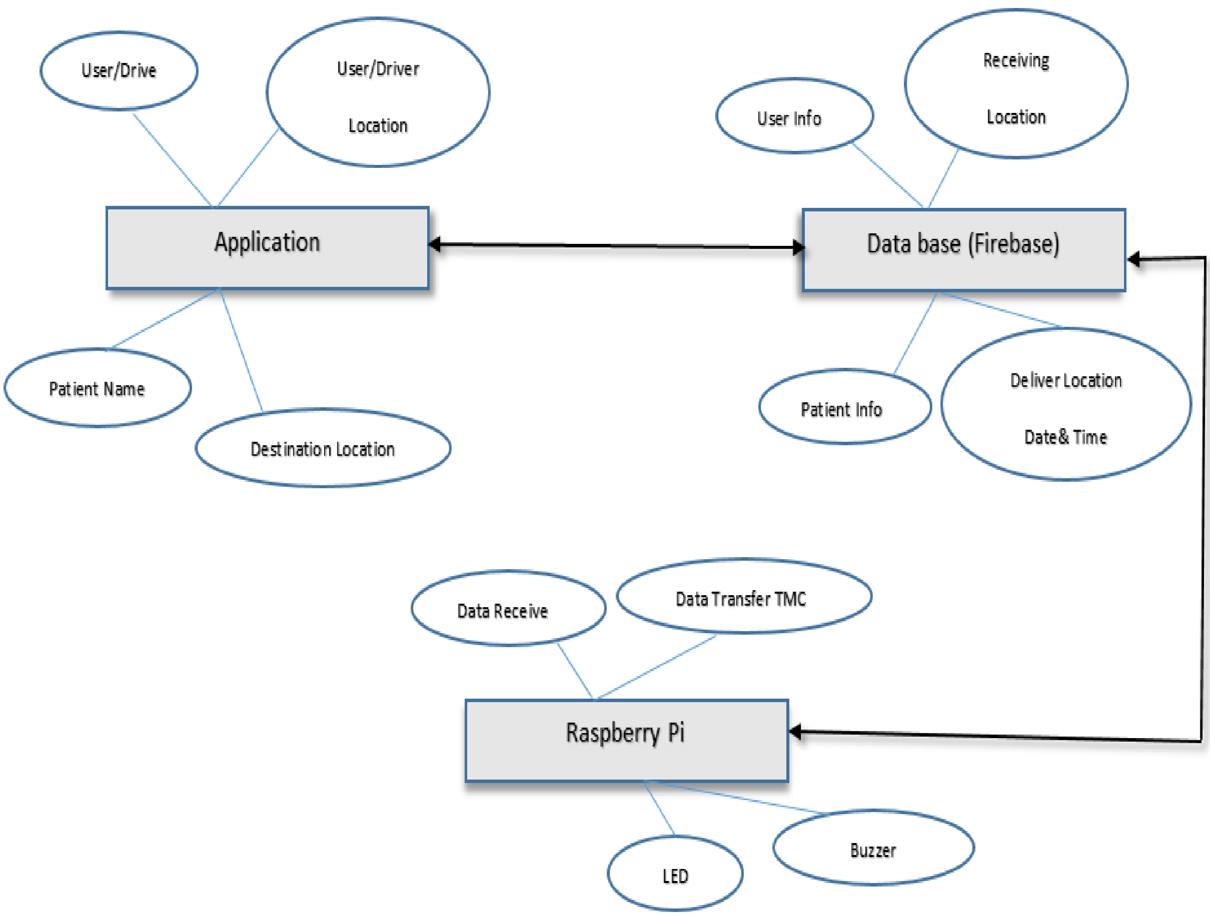


Figure 14: EVPS DFD (1st Level)

3.2.2.1 GPIO Pins

A powerful feature used in the Raspberry Pi is the row of GPIO pins on the top edge of the board installed in it. GPIO stands for "Used for On-Purpose Input/Output" on a general-use basis. These GPIO pins are actually a kind of physical interface between the raspberry pi and the outside world. On the simplest star, you can study this as a switch that can be physically turned on or off by a human or can be turned on or off depending on the pi.

GPIO allows the Raspberry Pi to control and monitor actions in the outside world by connecting it to any electronic device (that it may have in the system).The Pi is able to control the LEDs used externally, drive motors of any type of electronic device, and many additional tools and software with hardware. It can also be seen as physical computing in the outside world to find out whether a switch has been used, whether a switch has been pressed or not.

There are 40 pins on the Raspberry Pi (26 pins on early models), which provide different functions depending on the medium. We have to make sure that the pin label is placed with the ring hole on the front of the USB port pointing out.

Figure 15: Raspberry Pi Foundation

S/N.	Label	Voltage	Description
1.	3V3	3.3 volts	Anything connected to these pins will always get 3.3V of power
2.	5V	5 volts	Anything connected to these pins will always get 5V of power
3.	GND	Ground	Zero volts, used to complete a circuit
4.	GP2	GPIO pin 2	These pins are for general-purpose use and can be configured as input or output pins
5.	ID_SC/ID_SD/DNC	Special purpose pins	

Table 1: Raspberry Pi Voltage Details

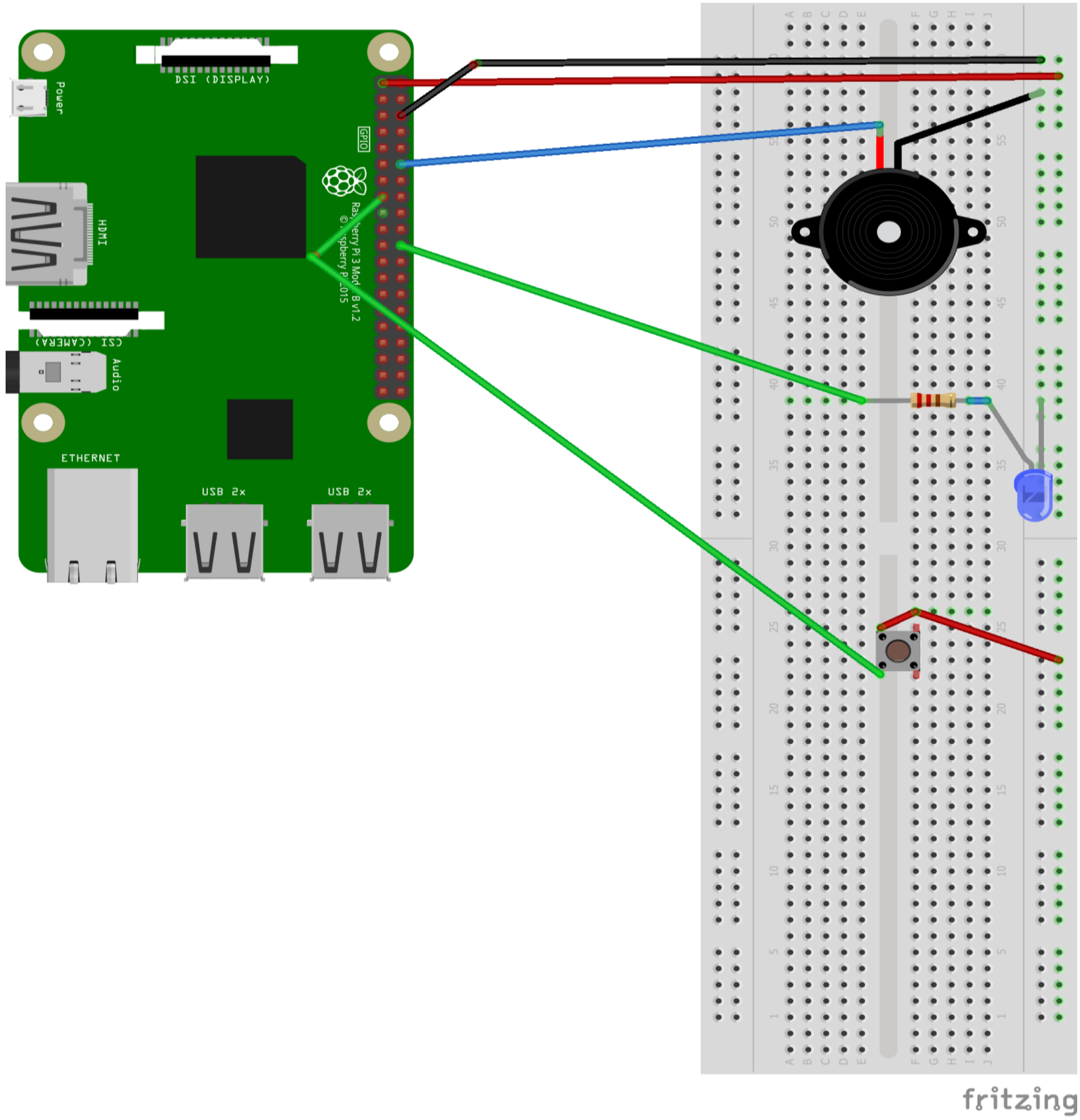


Figure 16: Raspberry pi and Breadboard wiring diagram

3.2.2.2 Gpiozero

A simple interface to GPIO devices with Raspberry Pi, developed and maintained by Ben Nutgall and Dave Jones.

Component interfaces are provided to allow a frictionless way to get started with physical computing:

```
from gpiozero import LED
from time import sleep
```

```
led = LED(17)

while True:
    led.on()
    sleep(1)
    led.off()
    sleep(1)
```

With very little code, you can quickly get going connecting your components together:

```
from gpiozero import LED, Button
from signal import pause

led = LED(17)
button = Button(3)

button.when_pressed = led.on
button.when_released = led.off

pause()
```

You can advance to using the declarative paradigm along with provided to describe the behavior of devices and their interactions:

```
from gpiozero import OutputDevice, MotionSensor, LightSensor
from gpiozero.tools import booleanized, all_values
from signal import pause

garden = OutputDevice(17)
motion = MotionSensor(4)
light = LightSensor(5)

garden.source = all_values(booleanized(light, 0, 0.1), motion)

pause()
```

3.2.2.3 Switching LED on and off

GPIO Zero is a new Python library which provides a simple interface to everyday GPIO components. It comes installed by default in Raspbian.

rust_gpizero is a Rust implementation of the GPIO Zero library. It provides a simple interface to GPIO devices on the Raspberry Pi and is ideal for getting started with physical computing using Rust.

```
git clone https://github.com/rahul-thakoor/physcomp-rs-files


cd physcomp-rs-files
```

This directory contains the scaffolding for the whole lesson.

```
physcomp-rs-files/
├── Cargo.toml
├── README.md
├── examples
│   ├── button.rs
│   ├── buzzer.rs
│   ├── flash.rs
│   ├── led_button.rs
│   ├── onoff.rs
│   ├── switch.rs
│   └── trafficlights.rs
└── src
└── main.rs
```

You can switch an LED on and off by writing a program. Open and edit the onoff.rs file in the examples directory using your preferred editor with the following:

```
extern crate rust_gpiozero;

use rust_gpiozero::*;



fn main() {



    // Tell the Pi which GPIO pin you are using

    let mut led = LED::new(17);



    // Make the led switch on
```

```
led.on();

}

###OFF
```

```
extern crate rust_gpiozero;

use rust_gpiozero::*;


fn main() {


// Tell the Pi which GPIO pin you are using

let mut led = LED::new(17);


// Make the led switch off

led.off();

}
```

3.2.2.4 Flashing LED

With the help of the sleep function and a little loop, you can make the LED flash.
Edit the examples/flash.rs file in an editor with the following code:

```
extern crate rust_gpiozero;
use rust_gpiozero::*;
use std::thread::sleep;
use std::time::Duration;

fn main() {

// Tell the Pi which GPIO pin you are using
let mut led = LED::new(17);

loop{
    // Make the led switch on
    led.on();

    // Let the LED stay on for one second
    sleep(Duration::from_secs(1));

    // Make the led switch off
```

```
        led.off();

        // Let the LED stay off for one second
        sleep(Duration::from_secs(1));
        }
    }
```

In rust_gpiozero, an LED has a blink method which allows you to simplify the above code. The method takes two parameters, on_time and off_time. on_time is the number of second(s) the LED should stay on and off_time is the number of second(s) that the LED should stay off.

```
extern crate rust_gpiozero;

use rust_gpiozero::*;



fn main() {



  // Tell the Pi which GPIO pin you are using

  let mut led = LED::new(17);



  // let the LED blink indefinitely, staying on for 1 sec and off for 1 sec

  led.blink(1,1);

}
```

3.2.2.5 Manually Control LED

You can now combine your two programs written so far to control the LED using the button.
The examples/led_button.rs file to add the following code:

```
extern crate rust_gpiozero;

use rust_gpiozero::*;

use std::thread::sleep;

use std::time::Duration;
```

```
fn main() {

// Tell the Pi which GPIO pin you are using
let mut led = LED::new(17);

// Create a button which is attached to Pin 22
let button = Button::new(22);
button.wait_for_press();
led.on();
sleep(Duration::from_secs(3));
led.off();

}
```

3.2.2.6 Using Buzzer

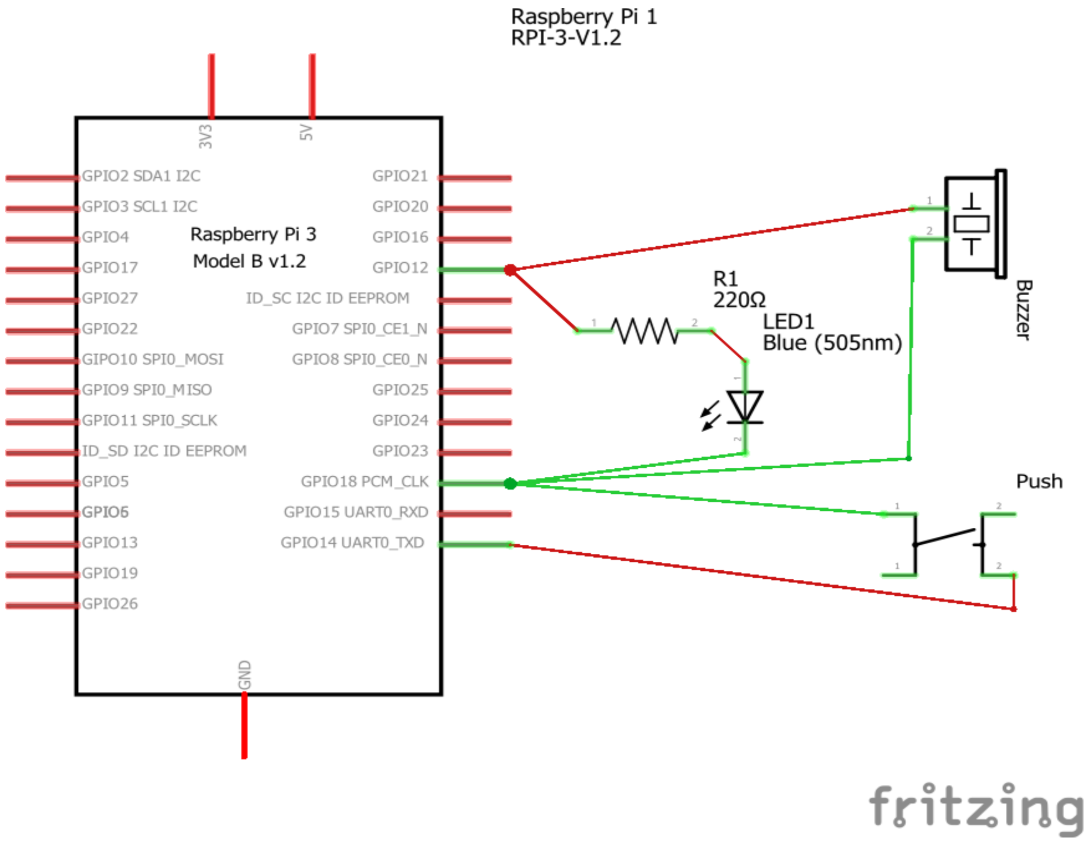


Figure 17: Circuit Digram Respbarry pi and objects

CHAPTER 4
SIMULATION AND COMPARISON

S No.	Classifiers	Precision(%)	Accuracy(%)	Cost
1.	EVPS(Emergency Vehicle Priority based System) Firebase, Raspberry-Pi	97	95.5	non Effective
2.	Traffic Control Unit (TCU), Monitor Unit (MU) and Road Side Unit (RSU).	85.5	70	Effective
3.	RFID (radio frequency identification) technology to implement the Intelligent traffic signal control.	89.9	90.8	Effective
4.	ARM7 system-on-chip and GPS device based system	91	86.7	Effective
5.	Traffic Density Estimation by Image Processing	85	91	Effective

Table 2: Compare method accuracy

4.1 Comparison all method use objects

EVPS system to be an experiment based on an Application, in which it can be used for the public by paying a one-time cost. Based on this technology, every emergency vehicle can be connected like ambulance, fire van, police etc., in which the vehicle driver is registered with the vehicle's validity, using this application by the driver's mobile. The actual position of the vehicle can be easily ascertained.

The TMC attained position can then easily give way to that vehicle from the traffic intersections through traffic control. Blue LEDs and sirens installed at traffic intersections will be used at those traffic points, so that it is easy for the rest of the public and traffic to recognize this system and vehicles (Ambulance, Fire van, Police) can reach their destination at the right time.

Test Data	Data Delivery Time (s)			
	North	East	South	West
Data 1	8.15	2.39	3.09	4.03
Data 2	4.05	2.3	1.35	4.75
Data 3	3.05	1.64	1.94	3.1
Data 4	3.53	2.41	1.87	2.39
Data 5	4.29	5.38	1.55	6
Data 6	2.08	3.28	1.36	13
Data 7	2.29	4.05	2.27	5
Data 8	3.26	2.35	1.2	3.27
Data 9	2.62	2.92	2.09	6.16
Data 10	3.70	2.96	1.85	3
Average	3.702	2.968	1.857	5.07

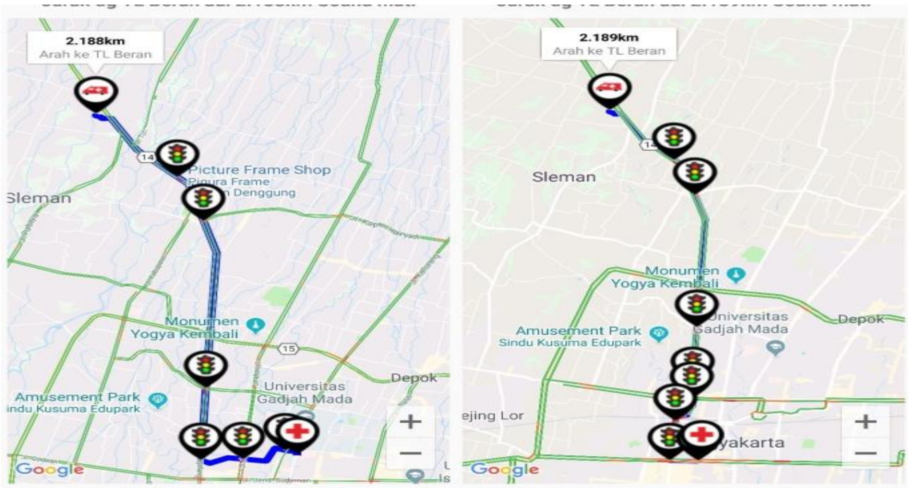
Table 3: Data transmission proposed

In the use of this system, the application will be used by communicating with the TMC through the Internet network, in which Raspberry Pi is of great importance, the data received from the use of the application will be used to make the system work further.

Table-1 shows the result of test transmission of data through internet using the application. The hardware is received by blue traffic lights at intersections, which will simultaneously generate a siren, notifying the public in traffic. The test is done multiple times by transmitting the data. In this test using the application, the test is conducted using the test which is shown in test-8.

Using this application the time taken from the receiving point to the destination point is calculated until the traffic controller receives the data from Firebaaz to generate a blue light and siren on the traffic signal. Blue lights applied in each direction and data received through the application can be received in an average of 3,702 seconds, the data transmission time received using the application is 1.2 seconds, which will be the highest, and 8.15 seconds will be the longest. Average data transmission will be 3.39 seconds.

Figure 18: Application Route



4.2 Other Methods:

4.2.1 Road Side Unit (RSU)

A Roadside Unit is a DSRC (Dedicated Short Range Communications) transceiver that is mounted along a road or pedestrian passageway. In which it takes time to transmit the data. Sometimes there is also a risk of missing data during transmission.

4.2.2 RFID

An RFID system consists of a tiny radio transponder, a radio receiver and Transmitter. In which the cost of installing receiver and transmitter everywhere becomes very big and its maintenance also becomes very expensive.

4.2.3 ARM

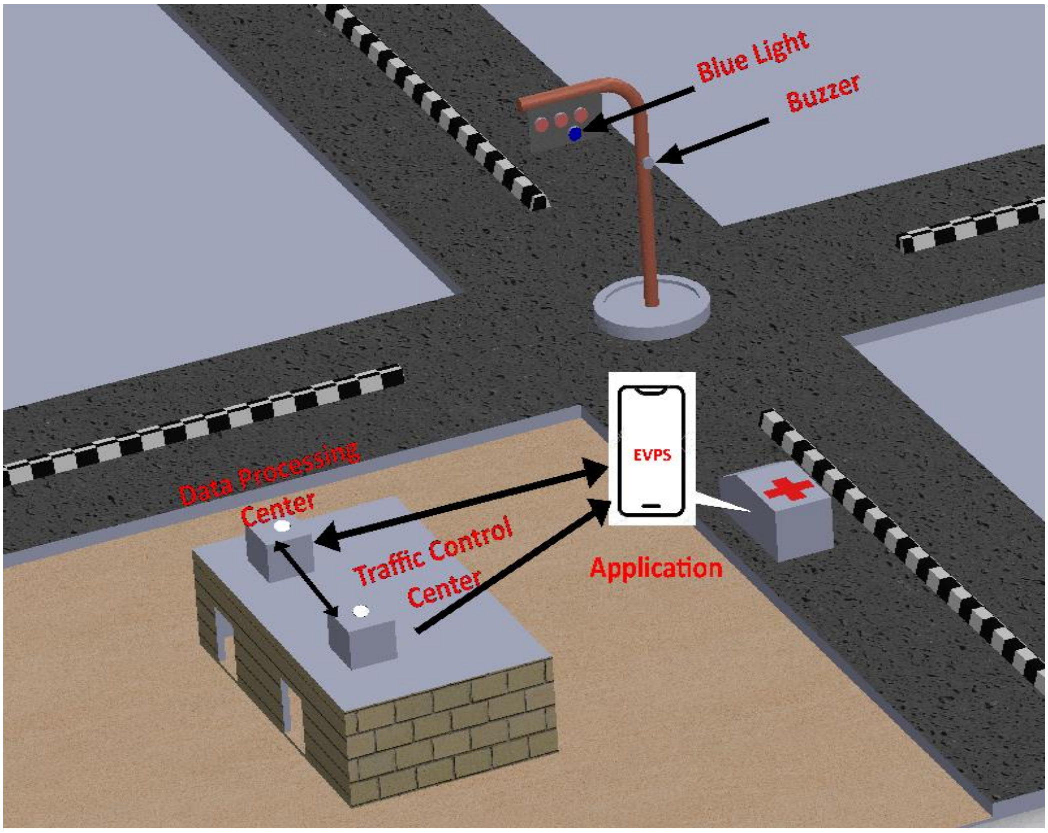
All vehicles have to implant this device using ARM7 (LPC2148) microcontroller, which is a very expensive deal.

4.2.4 Image Processing

Under image processing, the vehicle is identified at traffic intersections using a convolution method, but it is visible only to a shortest distance.

CHAPTER 5
RESULT

1. This EVPS Application system can be used to get rid of the ambulance not getting stuck in the traffic jam and for the convenience of the public. Which will give priority to accidental vehicles in the coming time. This system at traffic signals will help accidental vehicles to reach their destination.
2. Through this system, an accidental vehicle arrival at the traffic point will be informed by sounding a siren with a blue light indicating the signal.
3. It may take time for the public to accept it initially, but having the facility with smooth technology can not be a problem.
4. This will help casual vehicles, and make it easier for ambulances to get through without getting stuck in traffic jams.
5. The use of this system is to give a separate system to the already running traffic system, so that the traffic control system cannot be obstructed.
6. This control will be led by traffic guards at all traffic points which will be passed by traffic control monitors.



CHAPTER 6
CONCLUSION

1. This vehicle will prove to play an important role for patients under the priority system.
2. Health services, more congestion of vehicles, transportation will reduce the inconvenience of the public by demanding its expertise and importance from a higher level and will help them to reach the destination at the right time through this system.
3. Less time will be consumed by the operator and more distance can be fixed quickly.
4. To assess the maximum benefits and cost effectiveness of this intervention are necessary.
5. Subsequently, our conclusion image classification method will facilitate more advanced search.

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Emergancy Vehicle Preority Based System

Kamlesh Maurya

Assistant Professor Department of Computer Science and Engineering

Integral University, Lucknow)

Sarfraz Ahmad

Department of Computer Science And Engineering,

Integral University, Lucknow.

***Abstract*— Every country's vehicular traffic is increasing, growing, and there is terrible traffic congestion at intersections. In the current case, most traffic lights have a fixed light sequence, so green light sequence is to determine with-out taking priority vehicles into account. As a result, priority crews such as police cars, ambulances, fire engines are still unable to perform, get stuck in traffic and come in late, which can result in the loss of valuable property and life, which does happen on occasion. The green light sequence is evaluated given the current state of traffic, without taking into account the existence of emergency vehicles. Our aim to this paper is to present a mechanism for scheduling emergency vehicles. It is provided to important such as access control protocol to convey emergency vehicle information to the Traffic Management Center (TMC) with time delay and to all alerts while using GPS techniques for acquiring emergency vehicle information. Only then is the emergency vehicle quickly dispatched, and the destination is reached on time. It would be helpful in the future for the prominence of casual vehicles.**

Keywords—GPS Tracking Ambulance, formatting, distance measure technique; priority vehicle; emergency lights; control traffic monitor for priority based.

(I.) Introduction

In every intelligent traffic management system, traffic light control is critical. In traffic light monitoring, the sequence of green lights and the length of green lights are the two most significant variables to consider. Most traffic lights in many countries include fixed light sequence and light time duration. Priority crews methods, but at the other hand, are suitable for secure or normal traffic, not for dynamic traffic. In the present state of operation, the sequence of green light is established with-out taking into account the possibility of the presence for emergency priority vehicle. As a response, emergency vehicles such as , police cars, fire trucks, ambulances and other types of emergency vehicles wait in traffic points at intersection, avoiding their arrivals at particular result and destination in the loss of life and property. Ireland, an average of 700 fatalities was noted every year due to come late ambulance vehicle responses [1].

Mostly researcher have built pre-emption systems that measure the signal time based on the specific distance in between emergency vehicle and intersection. Our present a new and unique approach for calculating distance in between an emergency vehicle and an intersection use a real time data feed from intersection sender response in this paper. Our aim is to install another lighting in addition to the green light, in which we are proposing a new blue light to them without disturbing the traffic rules and their control system.

Through this, when this emergency vehicle has to be removed from traffic, only this new blue light will be used. To target emergency vehicles, a range of traffic control systems have been introduced [4]. The maximum part of this research has been based on the design of an intelligent traffic control system to provide vehicle evacuation systems in the event of an emergency. (5),(6),(7)

(II.) Background

The (GPS) global positioning system is a space/cloud based satellite navigation system. That offers a location and roadside assistance time information in all environment condition. This technology is basis on Social natworking, person anywhere or near the earth where 2 or more satellites are visible. (2) The work of GPS is helpful in identifying two or more satellites and measuring their distance and calculating their actual position using the information obtained. The term (RFID) radio frequency identification typically refer to complete system that include three main component: an Rfid reader Rfid tag and application also. RFID tags are a type of micro electronic device with an antenna and an antenna inside it. According to the application, the chip is usually capable of carrying certain types of data. We use RFID readers, which are known as interrogators in a way, to detect the actual presence of the vehicle.Related Work:

1. As the number of vehicles on the road continues to increase, traffic congestion and transportation delays occur in many countries around the world. fire trucks, ambulances and police cars, for example, should be able to respond to emergency calls as quickly as possible. The quality of an emergency response is determined by how quickly emergency vehicles can arrive at the scene of an incident. If an emergency vehicle becomes trapped in traffic and takes longer to arrive at the scene of the crash, lives and property can be lost. According to the future times, density based smart traffic system is needed keeping in mind the priority and traffic to make the transportation efficiency and emergency action timely.

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Emergency Vehicle Priority Based System

Sarfraz Ahmad, K. C. Maurya

Department of Computer Science and Engineering, Integral University, Lucknow, Uttar Pradesh, India

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ABSTRACT

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