

# Emergency Ambulance Service with Accident-Prone Area Detection

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**Abstract-** Initially the ambulance driver did not know the exact location of the accident spot because of the heavy traffic due to this we cannot save many people's life. By current technology era everything runs on smart phones and applications so we created a mobile application by live tracking of ambulance service. This app will have ambulance driver's register their availability and location. Either executive emergency helpline or user's on client side will book an ambulance and the user login .The user's location will be pin pointed on the Google map and even the ambulance which is nearby the user will be pin pointed on the map , once the patient is on board the ambulance location is pointed and it will send to the admin this location will be shared to ambulance driver and then the list of hospitals are pointed out on the map which helps the admin to choose the nearby hospital to take the patient on time. The ambulance location is tracked by the navigator geolocation method based on Rest FUL Web Services. This technique will help the ambulance location to be updated in the database. Moreover, the ambulance driver can control the traffic signals by the upcoming ambulance route by changing red to green signal.

**Keywords —***Emergency Ambulance, Ambulance tracking, Location Tracking, GPS, Public Safety, Mobile Application.*

## I. INTRODUCTION

In today's world most of the cities have serious issues with traffic control and traffic congestion, these results in quite uncomfortable situation for the ambulance. These highly populated urban cities witnessing many such accidents results in the deaths from accidents. This can be resolved through administrative action records system framework. The primary goal of this proposed system is to minimize the practical implementation by ensuring a planned movement for ambulances to enter hospitals in time. The concept behind this framework is to construct an Intelligent-Transport-System that would automatically regulate the traffic lights in the ambulance's path. The Micro-Controller-Unit regulates the ambulance and provides the shortest route there. It also manages the traffic signal in accordance with the ambulance getting the infirmary from the site. The server similarly pinpoints the accident's position. Through the vehicle's sensing systems when it interacts with the server which passes the ambulance of an accident and its exact location. This automatic system locates the accident site, manages traffic signals, and aids in timely arrival at the hospital. It also sorts out the accident-prone areas while travelling it gives the alert when there are some accident-prone areas are arrived at.

## II. LITERATURE SURVEY

**1.Anjan Koundinya and Pratik Mohapatra's work, Ambulance Hub:** A Cloud-Based Ambulance Service Solution, discusses this topic. Ambulance Hub is located

here. attempts to resolve all of this using a straightforward approach, namely a cloud-based application Ambulance Station enables a dispatcher to connect ambulances with drivers who want to give rides. An ambulance can be called by simply clicking the dedicated SOS button on the Ambulance Hub. It sends a request to the Ambulance Hub server using the Microsoft Azure cloud. lateral application the closest ambulance receives a notification when it is sent to the server-side program, and he is provided the quickest and shortest path to the site. Additionally, Ambulance Hub offers a smart bot that can answer questions about common first aid and comprehends keywords. The intelligent bot recognizes key terms and recommends appropriate first aid measures It is extremely fast with no lag. It also syncs with all of the user's medical records, including emergency numbers that can be called if an injury occurs. It also recommends exercises and steps to take. take in order to stay. This is accomplished by comprehending the user.

**2.Arsalan Khan and his team on accident detection and intelligent rescue system:** Accident detection and smart rescue are the main topics covered in the paper that Arsalan Khan and his team delivered. System with real-time location tracking utilising an Android smartphone. It implies that in an effort to decrease responsiveness. In order to reduce response time, it would be necessary to install improved traffic technology and thereby reduce fatalities. The creation and implementation of such an automated system is the aim of this research a system that uses smartphones to detect car accidents and alert nearby emergency personnel when one occurs. The detection system would be helpful in

addressing these new issues and minimising casualties to the greatest extent possible. By speeding up emergency service response, we can reduce the number of people who die in car accidents. The system will also offer other emergency services such as emergency medical, fire, and police services. In this project, an Android smartphone is used to identify accidents and notify the closest emergency responders of the precise position of any victims. On the side of emergency responders, the technology would alert them to nearby situations and give them access to real-time Google map monitoring of emergency victims. This will make it easier for rescuers to locate victims and get them to safety as quickly as possible.

**3. Article presented by Rishabh Mishra, Rohit Kumar, and Shubhanshu Singh Patwal:** The Smart Band Ambulance System is the focus of the article presented by Rishabh Mishra, Rohit Kumar, and Shubhanshu Singh Patwal. As IoT can be widely employed in many systems where vast A large amount of data can be easily accessed and processed, and it can be used smoothly to increase emergency medical response via smart band ambulance systems. I-o-T and smart devices aid in the development of a platform that benefits all smart device users, with a smart band's continuous focus being on heart rate monitoring of the wearer. This information will be gathered by an request then directed to a central data-base, wherever it will be screened for any abnormalities and, if any are discovered, the person concerned will be notified. If an ambulance is required, it will be summoned to their location. With the use of G-P-S and the Google Maps A-P-I, users may use their cell phones to view the location of the ambulance that has been dispatched.

**4. St. Johns has agreed to supply a crisis clinical vehicle to Crown Health Enterprises:** The contracts require St. Johns to provide a bare minimum of service as defined by specific performance goals. These goals are related to response time, which is defined as the time between receiving a call and arriving at the scene with an ambulance. The performance targets are divided into two categories: call location (whether the call is in Auckland or in a rural area) and call priority. St. Johns distinguishes between two types of emergency calls: patient transfers and other non-emergency calls. Priority 1 calls necessitate an ambulance arriving as soon as possible, including the use of lights and sirens. Priority 2 calls are those that necessitate the use of an ambulance. may respond at normal traffic speeds

**Table: Contractual service**

| Target       | Priority 1                             | Priority2         |
|--------------|--|-------------------|
| Metropolitan | 80% in 10 minutes<br>95% in 20 minutes | 80% in 30 minutes |
| Rural        | 80% in 16 minutes<br>95% in 30 minutes | 80% in 45 minutes |

**5. Bhavish Aggarwal and Ankit Bhati.** Ola Bhavish Aggarwal, the current CEO, and Ankit Bhati founded Cab on December 3, 2010. As of 2017, the company had over 600,000 vehicles spread across 110 cities. Ola expanded to include autos on a trial basis in Bangalore in November 2014. Following the trial period, Ola Auto began expanding to other cities such as Delhi, Pune, Chennai, Hyderabad, and Kolkata in December 2014. Ola expanded its auto services in Mysore in December 2015, Chandigarh, Indore, Jaipur and Guwahati, Visakhapatnam. Ola was valued at \$US5 billion as on September 2015.

**6. Supriya Vidhate, Mamta Tadavi, Manisha Jagtap, and Rajratan Janrao developed an accident identification system with SMS notification.** Highway accidents are increasingly widespread in today's globe. Poor medical attention following accidents cause many people to pass away every year. There is no reliable way to alert the appropriate authorities in time for the person's lifetime to remain protected. We are developing a system that resolve not simply identify any Not only should you report any car accidents to the proper authorities right away, but you should also do so. Eight digital sensors that are positioned throughout the car have been connected to the C. Any time an accident is discovered, C receives a pulse. The c then activates a bell and sends an emergency SMS to the appropriate people (using AT commands).

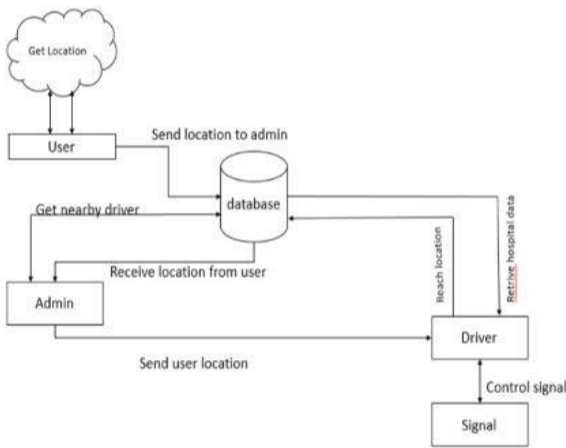
### III. PROBLEM IDENTIFICATION

Existing system normally takes a long time to get medical help from hospital under the current system due to incorrect information. The ambulance driver has trouble in getting to the accident scene quickly due to dense traffic. This may lead to many casualties and people may lose their lives or get into difficulty. How to provide ambulance facility and support for medical help at the earliest is the problem found in this project.

### IV. PROBLEM SOLUTION

A mobile app that allows users to request for an ambulance and allows the users to submit the location of the accident to the administrator. Who will then receive the address for the GPS coordinates the user provided. The ambulance driver will be informed about this location. Once the information

is shared the ambulance driver will arrive at the location. Subsequently, the ambulance driver will notify the administrator, who will then send the driver the address of a nearby hospital for medical help. The operator has facility to Change the red signal to green signal indicator to indicate the upcoming ambulance route. The admin and then collect the hospital's address. The indication for the approaching ambulance route is under the driver's address. The administrator will be notified of the accident location. from the user and save it in the database after which the administrator will locate a driver nearby and share the accident spot location with the driver. Once the driver approaches at the scene of the accident, the driver will notify.



**Fig- Flow Diagram**

The project explains flutter apps on the web for building application. Chrome and Web server should now be visible in your Integrated Development Environment's gadgets pulldown menu or at the order line with shutter gadgets. Chrome is naturally sent off by the Chrome gadget. The Web server dispatches a server that has the application, permitting you to stack it from any program. Utilize the Chrome gadget while creating to involve DevTools and the web server for testing on different programs. See Building a web application with Flutter and Writing your most memorable Flutter application on the web for more information. Flutter apps are capable of also be built for desktop. Your operating system should be listed under devices in your Integrated Development Environment, such as Windows (desktop), or you can use flutter devices at the command line. See Write a Flutter desktop application for further details on creating desktop applications.

**V. FUTURE SCOPE**

The undertaking's future degree can be arranged using a portion of the very thoughts that were utilized in current one. There are other extra rules that may be viewed as to save lives. Perhaps of the main issue individuals manage consistently is traffic. This could make the rescue vehicle show up at the medical clinic later than arranged. Assuming

traffic police know about where the emergency vehicle is as of now found, they can aid this. Traffic police will be provided an application for this motivation that utilizes GPS to give the ongoing area of the rescue vehicle. Starting here on, traffic police will can clear the street for the rescue vehicle. Thus, In future it could get helped for the a great many people who stay in metropolitan urban communities where there is significantly more traffic and you don't get unexpected judgment in such basic circumstances to what to do and how to deal with such condition then the individual could overcome with this application which may simple go.

**VI. CONCLUSION**

Patients also as clinics can profit from the application. Every one of the client's needs to do to demand a rescue vehicle is open the program, make his solicitation, and inside the space of minutes the nearest emergency vehicle will be found and directed to the ideal region. Your application and demand will find the nearest emergency vehicle and direct it to the spot in no time. The driver gets the specific position, so there's compelling reason need to call to illuminate him where to go.

The driver gets the specific area without the requirement for a call-ahead demand, which is the best part. Likewise, the client approaches a bot that, all at once, will let them know what medical aid measures to take instead of calling or looking on the web for a similar data. This whole program is useful for something beyond calling an emergency vehicle; it likewise can store clinical data and even tell the proper people when an individual experiences a mishap.

We have developed our project and if it works as we have expected then it will be very successful application which will be useful in our day-to-day life. And according with smart city project we will be able to go one step forward in health sector also. In this paper, an idea is developed for saving a patient's life in a faster way as possible. It is very important for users in case of emergencies as it saves time. With this Application, the ambulance can reach to the user or patient as location is tracked or given through the application and also can provide necessary equipment's which is required for the patient's health.

All a user needs to do to request an ambulance is open the application, make his request, and then within minutes the local ambulance will be found and sent to the desired area. The fact that the driver receives the exact location and doesn't need to be called to give him directions is the finest aspect. Additionally, the user gets access to a bot that will tell them what first aid measures to do in a single step rather than having to call or search online for the same information. This programme is helpful for more than just calling an ambulance; it also has the ability to save medical information and even alert the relevant parties when there is an issue.

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