Implementation of E-Ambulance using GPS

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***Abstract*— There are a vast number of researches in sensor networks, medical devices, wireless communication, middleware software and software applications that help advance improvements in the healthcare systems. Health monitoring systems deliver health status reports to actors such as people under monitoring, practitioners and coaches for several purposes. In this paper, we propose E-Ambulance framework, which is a smart ambulance system model that provides health monitoring of patients for remote medical professionals. As well as provide an automatic responses of about nearby location, available ambulances in nearby areas. This system enhances the ambulance availability in hand. There are so many proposed system like OLA cab, UBER and etc. But there is no such proposed system for ambulances. This Research paper is describe about ambulance availability in India how difficulty people facing about to find ambulances and many other prospective is defined in this research paper by the researcher.**

Keywords-GPS; Real Time System; Distributed System; mobile application; cloud; ambulance; Ambulance; AMAR the app; Health.

INTRODUCTION:

A new healthcare app could help solve the problems of India's emergency medical response system by offering users an Uber-like service for ambulances. Low public funding and heavy traffic on badly organized roads has resulted in a slow and at times unresponsive system, but the "AMAR"(app name) Health app plans to counter these issues through use of a service aggregation system. The global personal emergency response system is expected to grow at a CAGR of 6% by 2020[4], according to a report available from Research and Markets, but this growth could be greater if AMAR Health is successful in its aims. The healthcare sector in India is under constant pressure to accommodate the country's large population. To alleviate this pressure, the AMBER Health app aggregates ambulance supply from government and private hospitals, Patients are able to request medical response services in an organized manner, while hospitals can dispatch an ambulance and track the progress of incoming patients. In addition, the app offers users a variety of features including appointment scheduling and a healthcare management system. Success of AMAR app could influence other countries to adopt the app or introduce alternatives, resulting in a higher market value. AMAR app for ambulance mainly the idea behind how people facing the difficulty to get ambulance in short period or in emergency case. The another problem is also focusing by the researcher that is most of the time the helpline no of ambulance services(102,108) is not connected or it may be not answerable.[3]

The another prospective to making this research is also is like that the ambulances services takes 40 to 50 minutes to reach at emergency location.But with use of this AMAR app the people find the ambulances nearby also main advantage is to making this app is that they can also track the real time location of the ambulance. However, when it comes to ensuring that every patient's emergency medical needs are catered to, not all seems well. There are certain drawbacks that are inherent to the current infrastructure. Let us discuss the same, and see, whether if the same can be resolved using a new-age mobile application dedicated to ambulances. [1].

What "AMAR" will do:-

Following steps that should follow by users:

1 .Login into app with credentials (id, password, aadhar no, etc..,)

2. Then enter location manually or it may select the location automatically by GPS.

3. Then they proceed further like payment etc..,

4. After that they can keep track of real time location of the ambulances.

In this app we are using the latest technology. we are also using the chatbot system in this app where the people directly chat and find their solution about the app.

AMAR the app beneficial for all the people to find nearby ambulance location and book the ambulance with accepting terms and condition.

Some view of working of AMAR app:

fig.1:shows about location and their present ambulance.[6]

fig.2:show the advantage eith using the app. [6]

Models:

- Access nearest ambulance with the press of a button
- Alert the preferred hospital in case of emergency

- Allows you to keep track of dependents remotely
- Allows you to digitise all medical records and shares them with hospital in case of emergency
- Monitors vital parameters and sends reminders on hospital visits, medical checkups, etc.[5]

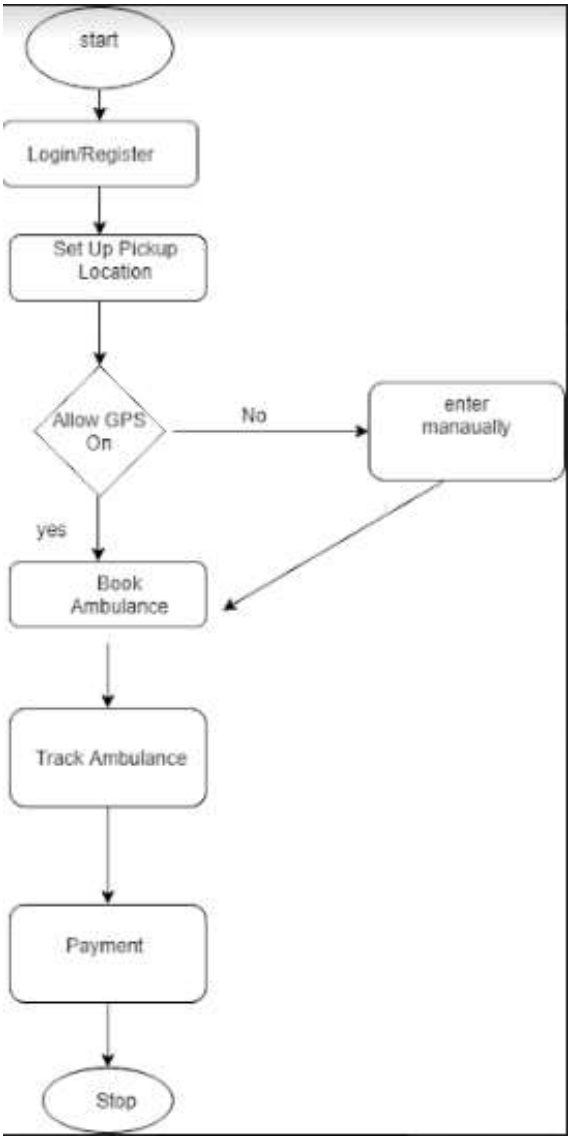

Fig.3 flow chart for app[7].

Advantages:

It is discernible that the national capital, as well as the country, on the whole, needs a path breaking idea which can help make emergency medical services accessible to the general population.To this end, it seems a mobile-based application can do the trick. As has been seen in the case of mobile-based cab services, an app dedicated for an ambulance might help bring the power back in the hands of the common man. Ideally, the app can offer benefits like –

- Booking an ambulance for emergency services
- Booking an ambulance for non-emergency cases
- Locating the nearest available ambulance and requesting the same
- Receiving the information and contact details of the driver
- Tracking the movement of the ambulance
- Receiving accurate details with respect to the time that the ambulance was in use and the distance that it travelled.

As far as the back end of such a service is concerned, the owners/managers of the ambulance fleets can be roped in. With the help of meticulously designed technology, these ambulance owners or managers can –

- Track all the ambulances at once
- Receive requests for ambulance bookings
- Locate the nearest available ambulance for allocation
- Send across driver's information and contact details to the patient
- Depending on patient's condition, allocate a suitable ambulance with the requisite features
- Depending on patient's condition, designate a paramedic and/or a doctor to be sent with the ambulance for Basic or Advanced Life Support, as required

Not only can such an app play a pivotal role in the way people avail emergency medical services, but can also prove to be extremely advantageous to the doctors. Given that the patient will be catered to, in the minimum possible time, he can be offered quick and efficient medical care, so that when he finally reaches the hospital, he is already in a stable or comparatively better state.Moreover, in cases, when the patient is being transferred from a remote area, the paramedical staff can communicate with the concerned doctor and provide the patient with the requisite care and prescribed drugs. This can be done by enabling the app in a manner that helps the doctor monitor the patient, while he/she is still in the ambulance. This can go a long way in saving the patient's life. [1]

Disadvantage:-

- This Ambulance "AMAR" app is only to use with those people who having smart phones.
- This app mainly depends on the internet, so internet should be present there.
- The disadvantage is like if there is any problem occurs with the location then it can be fall with their advantageous.
- This is disadvantageous for rural people mainly, where no network, no smart phones are available[3].

Conclusion :

This paper proposed an E-Ambulance system which is a smart ambulance model that provides auto response actions in addition to monitoring to increase the probability of saving patients from life-threatening conditions. GPS and other components and technologies are used to achieve this mission. Furthermore all aspects of real time mission critical systems as E-Ambulance system where any failure in available ambulance status information may result in poor patient outcomes. In our experimental work, we can track the real-time ambulance status measured performance of using GPS location. . In addition, the app offers users a variety of features including appointment scheduling and a healthcare management system. Success of AMAR app could influence other countries to adopt the app or introduce alternatives, resulting in a higher market value. AMAR app for ambulance mainly the idea behind how people facing the difficulty to get ambulance in short period or in emergency case[5].

Future Scope:

In future if this app growing perfectly then it can helpful for rural development society. In future the private ambulance is also add in this application so people can have no. of ambulance available for them that is very useful to reach and find.

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