

MEDIBOT FOR EMERGENCY VEHICLE

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ABSTRACT--To create a medical robot that would be installed in an ambulance and use IoT to observe and communicate so that the patient might receive care before being brought to the hospital. In the case of a mishap, installing a finger print sensor will enable the hospital emergency room, police station, and the patient's guardian to be informed of the unfamiliar patient's bio-data. There are still significant problems with overpopulation and health-related illiteracy in India, and an accident-related mortality happens every minute. To build a clever smart health system, a MediBoT made up of sensors and microcontrollers is intended. It will assess the body's condition and send information to the IoT.

Keywords-- Healthcare, IoT, Medibot , fingerprint sensor

INTRODUCTION

Due to rising jobs, there has been a rapid increase in the use of vehicles like cars and motorbikes. As a result, the number of accidents has also risen due to factors like speeding, intoxicated driving, and other factors. Saving a life is lucky and precious[1][16]. The prolonged provision of emergency assistance is primarily to blame for the increased risk of mortality. however many people a good evacuation operation could potentially save. A detection and warning system to find unnamed accident casualties and a medical internet bot make up the majority of the MediBot[2-4]. webot that uses sensors attached to the patient's body to send their vital signsto the hospital via a website and saves the data in the IOT cloud using a Nodemcu interfaced Arduino Uno. By being placed in rescue cars, this device can help us start treating the patient as soon as is practical. It assists in recognizing them by accessing their data through their thumbprint using the fingerprint reader R307[5][17]. It also uses the GSM module to transmit an SMS to the unidentified accident

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victim's guardian and the police control room through SMS

A webot, sometimes known as an Internet bot, is simply a software programme that uses the Internet to carry out automated operations (scripts), typically with the goal of imitating human behavior on the Internet on a wide scale, such as communicating. The "MEDIBOT" webot that's been created here handles the duties of medical web facilities deployed in emergency vehicles[6-8]. It mostly comprises of sensors that are attached to the patient's body to record the information, such as a temperature sensor and a heart rate sensor. A Nodemcu ESP8266 LED monitor will show the recorded readings on the Medibot homepage[4][13].

LITERATURE

A study of various published works, including research studies and journal articles, is required for a literature analysis of medical bot systems in order to determine how these computer programmes advise users on medical diagnosis, therapy, and guidance[9][15].

Studies have centred on how well medical bot systems diagnose illnesses like infectious diseases, mental health problems, and cutaneous ailments. For instance, research revealed that a medical bot system could accurately classify skin diseases in more than 90% of instances. The efficacy of medical bot systems in enhancing healthcare results, especially for chronic diseases like diabetes and hypertension, has been examined in other study. Better self-management practices and increased blood pressure control have resulted from these methods[3][12].

A. GPS Based System

In [3], Implementation of an accelerometer, GSM, GPS accident reporting system and an auto-activation system with a fingerprint reader. Security is enhanced by using a fingerprint reader to identify the user before starting the car. It uses GSM and GPS to automatically send messages to relevant authorities, providing real-time information on the location and nature of the accident[10-11]. Accelerometers are used to detect sudden changes in vehicle motion that may indicate an accident. System design and implementation focused on technical issues and limitations encountered and resolved during the development process.

B. Heart Rate Monitoring System

The system was combined with a communication system to support and improve the operations of rescue services in large areas in [6] and [9] incidents involving large numbers of victims. In the event of an accident, it is difficult to determine the identity of the victim. The proposed method enables personal and health identification of persons recorded using thumb scanners[3][14]. A patient's personally identifiable information may be retained throughout the course of an accident at the facility where the patient was admitted. Patients are enrolled, patient information and history are maintained, and eventually transition from temporary to real identities when circumstances permit. In an emergency, DNA becomes the most reliable method of identification.

C. Chatbot System

The Chatbot system preemptively with [5] with various sub parametric. Individuals with certain common symptoms of illness, or who use it as a decision aid before consulting a professional, need access to reliable medical information, including illnesses, symptoms, and advice. With the help of her four different components: a disease prediction chatbot in Tamil, a prescription reader that reads handwritten prescriptions, a skin disease predictor that detects skin diseases, and a smart IoT device that reads vital signs, "MediBOT" final language. A chatbot developed for the purpose of streamlining medical consultation services and reducing operating costs. The main goal of this work is to use her four unique features in one application to provide information about people's health and the best possible safety.

Search terms: CNN, Medi BOT, IOT (Internet of Things).

METHODOLOGY

Depending on the requirements and planned use of the system, different methodologies can be used to create Medical Bots. Nevertheless, a normal approach might have several steps. You would need to first determine the issue or circumstance that the method is meant to solve. The system's characteristics and capabilities would then be specified in order to ensure that the goals were met. Then, after choosing the required hardware and software components, you would create the system layout. Then you would create and evaluate each component of the system, including the robot engine, machine learning models, and natural language processing algorithms. In order to improve the accuracy and efficiency of the system, you would teach it using real medical data, such as patient data and medical expertise.



Fig 1-Interface between user and internet

Fig 1 represents Internet of Things (IoT) system. is a strategy for devices that contain technology and a network, allowing them to solve problems, work together, and swap information. IoT includes extending Internet connectivity beyond conventional devices like workstations to a variety of typically non-web accessible materials and everyday source items. These technologically advanced devices can communicate and collaborate over the Internet while also being somewhat checked and limited.

A. Existing

Implementation of an accelerometer, GSM, GPS accident reporting system and an auto-activation system with a fingerprint reader. Security is enhanced by using a fingerprint reader to identify the user before starting the car. It uses GSM and GPS to automatically send messages to relevant authorities, providing real-time information on the location and nature of the accident. Accelerometers are used to detect sudden changes in vehicle motion that may indicate an accident. System design and implementation focused on technical issues and limitations encountered and resolved during the development process.

B. Proposed

Implementation of an accelerometer, GSM, GPS accident reporting system and an auto-activation system with a fingerprint reader. Security is enhanced by using a fingerprint reader to identify the user before starting the car. It uses GSM and GPS to automatically send messages to relevant authorities, providing real-time information on the location and nature of the accident. Accelerometers are used to detect sudden changes in vehicle motion that may indicate an accident. System design and implementation focused on technical issues and limitations encountered and resolved during the development process.

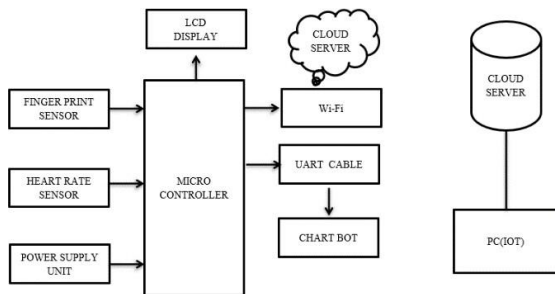


Fig 2-Sequential Flow of Chatbot System

The power supply (or PSU) converts AC line power to low- voltage regulated DC power for the controller's internal components. The power supply is used to step the mains power from 240 volts AC down to something more convenient, say 12 volts DC. There are two types of power supplies: linear mode and switching mode. A linear power supply uses a transformer to step down the voltage. An AC signal is rectified and conditioned to produce a high DC voltage. The Fig.2 Conveys the symbolical adjustment throughout. An AC adapter, AC/DC adapter, or AC/DC converter is a type of external power source that often comes in a housing that resembles an AC plug. Adapters for battery-powered devices are sometimes called chargers or chargers (see also battery chargers). AC adapters are used in electrical equipment that requires power but does not contain internal components to draw the required voltage and power from themains supply.



Fig 3- User Interface

The internal circuitry of an external power supply is very similar to the designs used for internal or internal power supplies. Fig 3 details the testament in the segment. Microcontrollers are programmable ICs that can perform multiple functions depending on how they are programmed. There are various types of microcontrollers that offer a wide range of functions. The versatility of microcontrollers makes them one of the most powerful tools in modern designs. This guide covers the basics of microcontrollers and how to program them.



Fig 4-Implementation Of UI

Similarly in Fig 4 User Interface commodity interleaves the various sequence of output performance. Testing involves confirming suitable behaviors. All stages of the introduction of a module, which include the necessities analysis, interface design, set of rules design, execution, and integration with different modules, can contain trying out. The awareness can be on utility trying out within the sentences that follow. Not best overall performance trying out is protected in implementation trying out. Additionally, peer evaluations, code tracing, and soundness proofs can all be used to assess an utility, as can be mentioned below.

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S.no	Name	Address	Temperature	Heart rate	Date And Time
1	Rithubharathan	Kovilabakkam,chennai	30	88	2023-03-20 15:02:01
2	K Naveen	Perungalathur,chennai	30	0	2023-03-20 15:00:22
3	K Naveen	Perungalathur,chennai	30	0	2023-03-20 14:59:55
4	K Naveen	Perungalathur,chennai	30	0	2023-03-20 14:59:23
5	user not registered		0	0	2023-03-20 14:59:20
6	user not registered		0	0	2023-03-20 14:59:13
7	Sanjaikumar	Tambaram,chennai	30	90	2023-03-20 14:57:46
8	user not registered		0	0	2023-03-20 14:57:40
9	Sanjaikumar	Tambaram,chennai	30	0	2023-03-20 14:57:11
10	Sanjaikumar	Tambaram,chennai	30	0	2023-03-20 14:56:24

Fig 5- Resultant And History Table

In Fig 5, it represents the conventional data collection in the server storage, deceiving a modular challenge throughout the terms. Execution checking out and code rectification are cyclical steps within the debugging process. Testing carried out even as troubleshooting has a wonderful purpose than checking out carried out earlier than a module is released. While checking out in the course of troubleshooting especially goals to locate mistakes, very last module checking out seeks to expose accuracy. The selection concerning checking out techniques is substantially impacted through this disparity. The GSM module, which incorporates an incorporated SIM and connects immediately to a community the usage of cell technology, will ship an SMS to the emergency touch and a file can be dispatched to the community police station. A internet server will ship the essential symptoms and symptoms at once to a nearby clinicafter being accrued through gadgets like a temperature monitor.

RESULT & DISCUSSION

Incorporating each element, we have been capable of increase a gadget that makes use of a fingerprint reader to pick out twist of fate patients, a GSM module to ship caution messages to the caretaker, and a web FIR registration to a close-by police station. Vitals are collected via way of means of the alternative gadgets and saved at the hospital's internet site. If the accidents are serious, a verbal exchange bot this is managed via way of means of medical doctors should provide steering to the medical doctors. This whole approach aids in dashing up the manner of finding the victim, notifying the caretakers, and beginning the desired

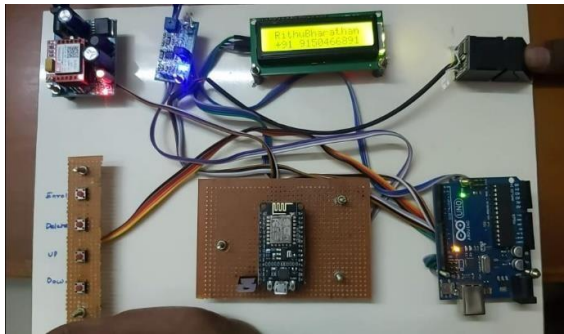


Fig 6-Proposed Structural Model

assistance.

The Compiled section of the gadget infinitely conceives the retarded area of the care taking unit represented in Fig 6. Major compliances of the chatbot gadget correctly represent technical demanding situations encountered round the encircling which displace semantics of the conventional movement procured. Various redistribution fragments via out the fitness care unit systematically envelopes the standards to confess the accidents of the consumer faced. The consumer interface constrains of the in charge enter and output sourcing facts which successfully reiterates the traditional algorithm.

CONCLUSION

The cautioned activity uses WSN a good way to characteristic greater efficaciously than the opposite guide duties. While the opposite is predicated on human procedures, our method is absolutely automated. This would possibly make locating the mechanism easy. In evaluation to different versions, our requirements will bring about higher results. Because the era is absolutely autonomous, it guarantees top notch protection, safety, and stepped forward security. The method we take makes use of wireless, approachable gadgets to alert the vehicles. Each display plays its precise assignment and troubles an alert. By figuring out this usage in regions with out a community within side the future, it is probably better even greater.

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