# DOCTOR ROBO(THE MEDICAL ASSISTANT ROBOT)

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*ABSTRACT- This paper reflects on the concept of automation in the medical healthcare sector. The idea is to design a robotic system that is capable of instantly checkup the people like Heartbeat, Blood pressure levels Fever & levels of Alcohol in the people's bodies. The medical assistant does the regular check-up on the people and saves the data in the file manager. If it found any problem it can connect to the Doctor virtually if it found any critical cases then it can contact to book an ambulance (depending on the condition). If it does not find any problem then it will provide more medication based on health issues. Therefore, it would be applied in that areas where the medical facility is not available immediately. The whole system is controlled by microcontrollers and IOT. The Purpose is to make this system available so the medical facility is not available immediately. The whole system is controlled by microcontrollers and IOT. The purpose is to make this system to the available medical facility is not available.*

*Keywords:*

***The medical assistant, IOT, microcontroller, medication.***

and to provide a contactless testing method for the doctors in hospitals to conduct routine checkups like measuring body temperature, heart rate, pulse rate, and oxygen levels of the patient. There is a necessity for contactless technology for testing patients to prevent the spread of viruses.

## I. METHODOLOGY

The project 's flowchart shows how module function will

## II. BLOCK DIAGRAM OF THE SYSTEM



## INTRODUCTION

According to the WHO member status report, we have less than one doctor per thousand people for providing proper support for medical health issues in our world.
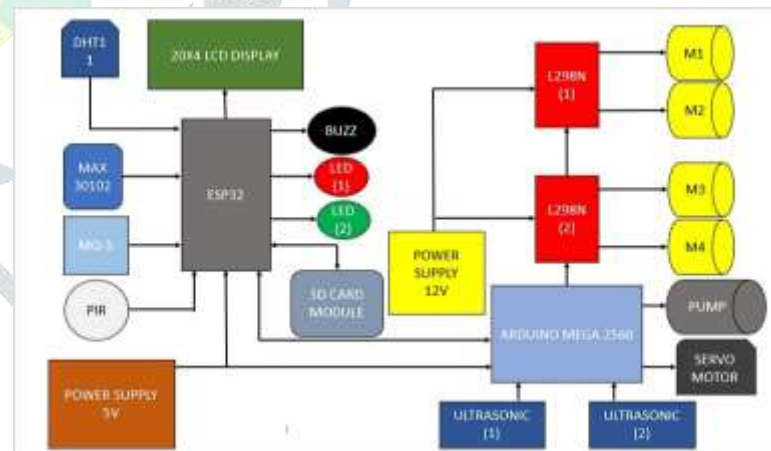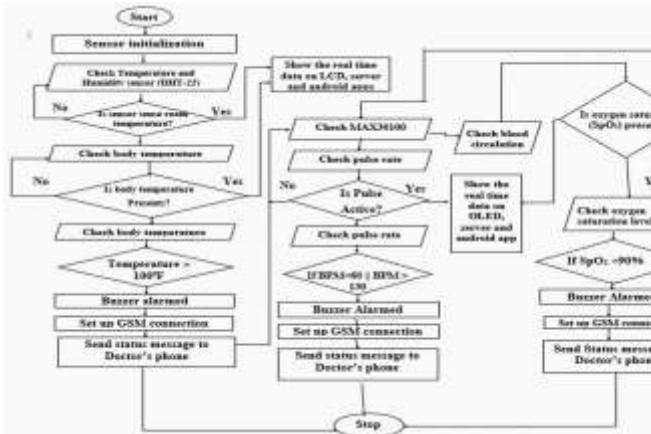
Nowadays hospitals and doctors are not available when we need them. Doctors and medical facilities are present where they are needed. Doctors are available in a very limited world to overcome the situation we made the doctor robot the medical assistant which is controlled by a microcontroller. It is light weighted, portable, and movable so that anyone can carry this device when they can go anywhere. The main goal of this project is to provide proper support in medical health issues in our world

### III. Architecture



### IV. Hardware Components

In this block diagram ESP 32 is the microcontroller of our project which is 32 bits. ESP 32 is connected to Arduino mega. we use Arduino because in ESP 32 has 32 pin which is less for connecting to the input. We have LED, Buzzer and LCD also.

In this we use LCD for output which is connected to the Arduino mega. ESP sends the signal or data which is print on the LCD.

Buzzer will be getting on with two condition-

If it found any critical condition then the buzzer will be on and the red led will be blink.

IF you take any action then buzzer will be getting on and green led will be blink.

Now we take an Input device. We have input device like DHT 11 is a sensor it gives input to microcontroller. It outs the signal and the ESP 32 takes it as an input. Max 3010- It generates the data and send to the ESP-32. MQ5- it also out the data the ESP-32 receives it like as an input.SD card module is for saving to the data it can receive or transmit the data.

### LITERATURE SURVEY

Doctor Robo is a digital assistant that uses machine learning algorithms and natural language processing to help doctors with their day-to-day responsibilities. With its abilities to extract information from patient medical records, analyze lab results, and aid in clinical decision-making, Doctor Robo aims to provide reliable and efficient support for physicians.

One study conducted by researchers at the University of Pittsburgh School of Medicine investigated the use of automated systems like Doctor Robo in reducing physician workload and improving patient outcomes. The study found that digital assistants such as Doctor Robo could significantly reduce the burden on physicians and improve the quality of care for patients.

Another study explored the use of AI-powered medical assistants like Doctor Robo in telemedicine consultations. The study found that AI-assisted consultation helped physicians to make more accurate diagnoses and prescribe more effective treatments, while streamlining the process of patient care.

While many experts in the medical industry see potential for AI-assisted medical assistants, some are hesitant to fully embrace the technology due to concerns over privacy and security. However, with the right regulatory frameworks and security protocols in place, digital assistants like Doctor Robo could revolutionize the way medical care is delivered.

### ADVANTAGE

- Increased adoption: Doctor Robo may become widely adopted in hospitals and clinics around the world. As more facilities become familiar with the technology and see its benefits, there may be a surge in demand for the system.
- Evolving capabilities: Doctor Robo may continue to evolve and offer new capabilities that improve patient health outcomes. For example, it may incorporate machine learning and AI algorithms to analyze patient data and make more accurate diagnoses.
- Integration with other systems: Doctor Robo may integrate with other health IT systems to create a more comprehensive patient record. This could include electronic health records, lab results, and medical imaging.
- Expansion to other industries: Doctor Robo may expand beyond healthcare and into other industries where there is a need for intelligent assistants. This could include fields such as finance, law, or customer service.

Overall, Doctor Robo could have a bright future in healthcare and beyond. As technology continues to advance and the demand for AI-powered assistants increases, there is a lot of potential for this system to play a crucial role in improving patient outcomes and streamlining medical workflows.

### CONCLUSION

In this paper, we have worked on designing and developing the medical assistant robot "Doctor-Bot" as primary patient monitoring and patient caring assistance with daily activities. For user friendly purpose we design "Docto-Bot" with manual and autonomous control system. Doctors from anywhere in the world will be able to show the all-patient data without touching the patient through the IoT system and make communicate video calls with the patient.

We believe this robot will go a long way in alleviating the lack of adequate doctors in medical services around the world. Anyone who knows primary operating can also use Docto-Bot as a medical assistant in his family. Machine learning and AI system will be carried through in the future.

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