IOT Based Patient Health Monitoring System Using Robot

Dinesh[1], Aniket[1], Aditya[1], Ajit[1], Mr.Shetti[2]

[1]UG Student,Sharad Institute of Technology Polytechni,Ydrav(Ichalkaranji),India
[2]Assi. Proffessor, Sharad Institute of Technology Polytechnic, Yadrav(Ichalkaranji),India

A B S T R A C T

Healthcare is given the extreme importance now a-days by each country with the advent of the novel corona virus. So in this aspect, an IoT based health monitoring system is the best solution for such an epidemic. Internet of Things (IoT) is the new revolution of internet which is the growing research area especially in the health care. With the increase in use of wearable sensors and the smart phones, these remote health care monitoring has evolved in such a pace. IoT monitoring of health helps in preventing the spread of disease as well as to get a proper diagnosis of the state of health, even if the doctor is at far distance.

1. Introduction

In this paper, a portable physiological checking framework is displayed,which can constantly screen the patient's heartbeat, temperature and other basicparameters of the room. We proposed a nonstop checking and control instrument toscreen the patient condition and store the patient information's in server utilizingWi-Fi Module based remote correspondence. A remote health monitoring system using IoT is proposed where the authorized personal can access these data storedusing any IoT platform and based on these values received, the diseases are diagnosed by the doctors from a distance.

2 Hardware Used

- Esp 8266
- Tempreature sensor
- Heartbeat Sensor
- ECG sensor
- Gear Motors & Wheels

3 Working

In case of any abrupt changes in patient heart-rate or body temperature alert is sent about the patient using IoT.

1. Hateart beatat sensor :- This is used to check the heartbeat pulse of the patient time to time.

2. ECG sensor :- ECG records the electrical activity generated by heart muscle depolarizations,which propagate in pulsating electrical waves towards the skin

3. Temperature Sensor- They are devices to measure temperature readings through electrical signals. The sensor is made up of two metals, which generate electrical voltage or resistance once it notices a change in temperature.

This all sensors keep doctor Upadted through Mobile Phone

4 Literature Survey

Internet of Things (IoT) and cloud computing plays a vital rolein today's Tele-monitoring health system. This system keeps track of patient'sphysiological parameters through collection of body sensors' data using ESP 8266board. The patient's health card are developed by the doctors and displayed on awebpage where doctors and patients can access and communicate each other without physical presence . Using cloud computing, the data can be stored, updatedand accessed from anywhere in the world. It is very suitable for rural areas where medical facilities are not available. In Remote health monitoring system using IoT,Body wireless sensor Network is used to transmit the patients' health parameters collected through Arduino microcontroller to the physicians and caretaker wirelessly.Being long range wireless technology, emergency situation of the patient's health is quickly detected and timely intervention leads to save the life of the patient.

5 Scope of Project

According to the availability of sensors or development in biomedical trend more parameter can be sensed and monitored which will drastically improve the efficiency of the wireless monitoring system in biomedical field. A Mobile phone can be used to display a graph of rate of change of health parameters over time.The whole health monitoring system which we have framed can be integrated into a small compact unit as small as a cell phone or a wrist watch. This will help thepatients to easily carry this device with them wherever they go. In addition with medical application we can use our system in industrial and agricultural application by using sensors like humidity sensors, fertility check sensors, etc.

6 Methodology

Nowadays Health-care Environment has developed science and knowledge based on Wireless-Sensing node Technolgy oriented.This is for specially monitoring the old age patients and informing doctors and loved ones. Patient Health Monitoring that uses sensor technology and uses internet to communicate to the loved ones in case of problems.This system uses Temperature ,heartbeat sensor and ECG sensor for tracking patients health. All the sensors are connected to the ESP 8266.

7 Algorithms for Arduino code

1. Start
2. Assign ESP pins for various functions using const keyword.
3. Assign the variable for reading the Heartbrat,ECG,Temprature Sensor
4. Assign the string for hold incoming data
5. Set serial baud rate
6. Initialize input and output pins
7. Take a input string
8. If input character is newline then set a flag
9. If input character is # then string complete
10. End

8 Conclusion

This system is automated by voice command and easy to handle. Anyone can use this system without operating it manually. Requires less power consumption which save electricity. Within few seconds, after giving the voice input we get the output as water from dispenser system. There is no unnecessarily waste age of water because of IR sensor.

REFERENCES

- https://youtu.be/Wfpvj9KlEMs
- https://youtu.be/Jyl3N1X3I4M
- https://youtu.be/59IK6_tDV78
- https://www.google.com/search?q=ESP8266+temprature+sensor&oq=ESP8266+temprature+sensor&aqs=chrome..69i57.11011j0j15&sourceid=chrome&ie=UTF-8