



e-ISSN: 2319-8753 | p-ISSN: 2320-6710

# IJIRSET

International Journal of Innovative Research in  
**SCIENCE | ENGINEERING | TECHNOLOGY**



# INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN SCIENCE | ENGINEERING | TECHNOLOGY

Volume 10, Issue 6, June 2021

**ISSN** INTERNATIONAL  
STANDARD  
SERIAL  
NUMBER  
INDIA

**Impact Factor: 7.512**



9940 572 462



6381 907 438



ijirset@gmail.com



www.ijirset.com

# IoT Based Patient Health Monitoring System

<sup>1</sup>G. Sunil kumar , <sup>2\*</sup> L.Chandrika , <sup>3</sup>S.Srinija , <sup>4</sup> G. Hemalatha , <sup>5</sup>J.Nikhil

<sup>1</sup>Assistant Professor, Department of Electronics and Communication Engineering , St. Peter's Engineering College,  
Hyderabad, Telangana, India

<sup>2,3,4,5</sup>UG Student, Department of Electronics and Communication Engineering, St. Peter's Engineering College,  
Hyderabad, Telangana, India

**ABSTRACT:** The health-related problems especially in remote areas is one of the major issues as it is evident that remote areas are devoid from the hospitals. Not only in remote areas but also in the cities it is not possible to monitor the patient 24/7 due to various reasons. Besides this, in current covid situation it is very much important to monitor the patient without going in contact with him too often. Such health-related issues are reduced to a certain extent by implementing the IoT based patient health monitoring system. Our project collects the data and uploads it in the cloud which can be accessed by the doctors and the patient's family from anywhere in the world. The collected data includes glucose level, temperature and pulse of a person. For the purpose of collecting data, we use different sensors such as temperature sensor, glucose level sensor and pulse sensor. All these sensors are connected to a Node MCU Microcontroller along with a Wi-fi module.

**KEYWORDS-** IoT, Node MCU microcontroller, wi-fi module.

## I. INTRODUCTION

Now-a- days Health care sector has become technology oriented. Humans are facing a problem of unexpected death due to various reasons such as heart attack which is because of lack of medical care to patient at right time. Health is the most important factor for human being [1]. Hence it is essential to monitor the health parameters. For continuous monitoring of the patient, there are doctors and caretaker in hospitals. But when patient is alone in the home or remote areas it is almost impossible for someone to take care of the patient. So, we are implementing this IoT based patient health monitoring system which monitors the Patient [2]. Monitoring system that is used to detect movement changes in the patient. Those changes may be either abnormal behavior or unusual changes made by the patient in the absence of a doctor. The method of patient movement monitoring system for those patients that are taking medical treatment in both hospitals and in home [5].

In this project, we use different sensors for the purpose of monitoring the patient's health. Pulse sensors to measure body pulse, and temperature sensor for measuring body temperature and humidity sensor for measuring humidity[3], the doctor can login from webpage with IP address allocated to patient, he need to login into the patient webpage to see the health parameters, on the same The webpage after checking patients health parameter [4], he can write a medical prescription to patient for medicines, once the doctor logouts the page, patient and doctor will receive the SMS from server, Doctor will receive SMS regarding payment, patient will receive SMS regarding medical prescription for the patient.

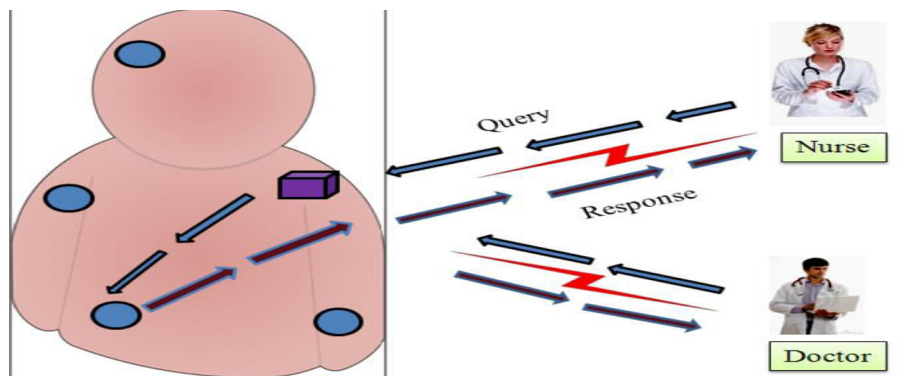
## II. LITERATURE REVIEW

- D shiva krishna; A innovative project that dodge the sudden death rates by using patient health monitoring system through internet and sensor technology
- The microcontroller is a system that connects all the sensors which are needed along with a Wiki module
- The IOT based patient health monitoring system using an internet is effective one that helps our loved ones and saves lives
- In this particular paper, Shiva gupta, Devesh chandra pandey and Prakar pratap singh gaur gives the development of microcontroller based system using wi-fi module for the temperature monitoring and the wireless heartbeat

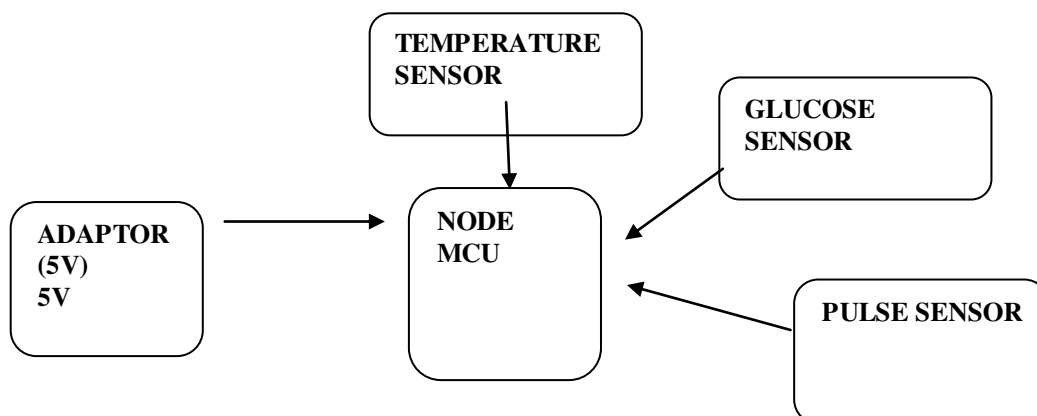
- By this, The real time information available for many users are provided easily and SMS send to the doctor in any critical condition using an internet.

### III. PROPOSED SYSTEM

In the proposed system we are implementing IOT based patient health monitoring system through which doctor can monitor information from anywhere in globe. Fig shows the overview of the project. Health monitoring for active and assisted living is one of the paradigms that can use the IoT advantages to improve the elderly lifestyle. In this project to analyse and compute the patient health we are using Node MCU Microcontroller, which is the heart of this project that used to collect temperature, glucose level, pulse which are used to evaluate the health condition of the patient. The final results are uploaded to the cloud server using IoT over internet. These data results can be stored in data base center which can be invoked from remote location at any time in an emergency case of patient without delaying the time. Our project plays important role in saving the patient life at emergency time.



### Block Diagram



### IV. CONCLUSION

As the technology is increasing still there some village where there is no proper medical facilities and where doctors cannot go all the time, so this project will be more help for doctors/ nurses for monitoring the health information from anywhere in the world. This project is very useful as compared to existing system in hospitals, which will help doctors to see the patient health



from remote location in emergency situation, and this project can be further modified as medical chair which can be useful for everyone. .

#### REFERENCES

1. S.H. Almutairi, M.A. Khan, and Alghamdi. Mobile health (m-health) system in the IoT context. In 2016 IEEE 4<sup>th</sup> International Conference on Future Internet of Things and cloud Workshops (FiCloudW).
2. Gulraiz J . Joyia, Rao M. Liaqat, Aftab Farooq, and Saad Rehman, Internet of Medical Things (IOMT): Applications, Benefits and Future Challenges in Healthcare Domain, Journal of Communications.
3. Shubham, Isha Madan and S.S. Saranya, Smart patient Healthcare Monitoring using IoT. International Journal of Applied Engineering Research ISSN0973-4562.
4. K. Perumal, M. Manohar, A Survey on Internet of Things: Case Studies, Applications, and Future Directions, In Internet of Things: Novel Advances and Envisioned Applications, Springer International Publishing, (2017) 281 - 297.
5. S. Riazulislam, Daehankwak, M.H.K.M.H., Kwak, K.S.: The Internet of Things for Health Care Environment: A Comprehensive Survey. In IEEE Access (2015).
6. P. Rizwan, K. Suresh. Design and development of low investment smart hospital using Internet of things through innovative approaches, Biomedical Research. 28(11) (2017).
7. K.R. Darshan and Anandakumar, "A Comprehensive review on usage of internet of things (IoT) in healthcare domain," in Proc. International conference on Emerging Research in Electronics, Computer Science and Technology, 2015
8. Internet of Things (IoT): Number of Connected Devices all over the World From 2012 to 2020 (in billions). [Online]. Available: <https://www.statista.com/statistics/471264/iot-numberof-connected-devices-worldwide/>
9. P. Chavan, P. More, N. Thorat, S. Yewale, and P. Dhade, "ECG - Remote patient monitoring using cloud computing," Imperial Journal of Interdisciplinary Research.
10. Ruhani Ab. Rahman, Nurshima Abdul Aziz, Murrizahkassim, Mat IkramYusof, IoT-based Personal Health Care Monitoring Device for Diabetic Patients , 978-1-5090-4752-9/17.2017 IEEE.





**Impact Factor:  
7.512**



# INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN SCIENCE | ENGINEERING | TECHNOLOGY

 **9940 572 462**  **6381 907 438**  **ijirset@gmail.com**



[www.ijirset.com](http://www.ijirset.com)

Scan to save the contact details