IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 3, May 2022
Impact Factor: 6.252

A Review on IoT Based Smart Healthcare Monitoring System for ICU Patients

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Abstract: *In recent pandemic situation due to coronavirus healthcare institutions have been experiencing tremendous strain. It is becoming very difficult to monitor each and every patient who requires intensive care. Keeping track of your patient's health status is a difficult task due to huge of patients and limited medical staff. Especially, critical and elderly patients should be monitored periodically. So, we propose an innovative and revolutionary and cost-effective system which automates the monitoring of all the vital parameters of health like Blood Pressure, Blood oxygen level, body temperature, heart rate, room temperature, room humidity, level measurement in urine bag, ECG. Our equipment uses a smart webserver to track patient health using this tracking system. So, using all these parameters patients can be monitored remotely for the all the health parameters listed above. In this project, an IoT-based patient health monitoring system using Node MCU ESP32 is presented. We can measure Heart Rate/Pulse (BPM) as well as Blood Oxygen Level (SpO2) using the MAX30100 /102 pulse oximeter sensor. We use the DS18B20 temperature sensor to measure body temperature. Similarly, the patient needs to be kept in a room having a certain temperature and humidity level. Hence, the patient does not feel uncomfortable in the room. To do this we also need to monitor the room temperature and humidity. So, we use DHT11 Humidity and Temperature sensor.*

Keywords: IoT (Internet of Things), Smart Healthcare, Healthcare Monitoring Systems, Wireless Sensor Network (WSN), Medical Services.

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