**SYNOPSIS**

**IoT Based Patient Health Monitoring using ESP8266 & Arduino**

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**Project Guide: - Prof. P.D KADAM**

**Problem Statement: -**

Data security in healthcare should address the following challenges:-

• Physical security of health devices

• Providing secure routing for data communication

• Providing data transparency in cloud computing environment.

• Maximum security with minimum resource consumption

**Why is the particular topic chosen?**

Keeping track of the patient **health status** of your **patient** at home is a difficult task because of the busy schedules and our daily life work. Specially **old age patients** should be periodically monitored. So we propose an **innovative system** that automated this task with ease. Our device puts forward a smart **patient health tracking system** using **Web Server** so that the **Patient health** parameters like **Pulse Rate**  etc. along with **body temperature** can be monitored.

**Objective of the Project**

* To develop health monitoring system i.e. it measures body temperature and pulse rate, etc.
* To design a system to store the patient data over a period of time using cloud.
* To do analysis of collected data of sensors.

**Scope of the Project**

IoT Patient health monitoring will provide increased independence and mobility for elderly, sick, and physically or mentally disabled patients and reduce stress for family and doctors who can be alerted and react immediately as soon as issues arise.

**Methodology**

The pulse values are sensed by the sensors and the sensor values are sent to the Arduino for further processing and the values are sent to Thing Speak remote server using ESP8266 Wifi module the data is visualized using Thing Speak server and the data is analysed. Arduino Integrated Development Environment (IDE) software is used to program Arduino that provides comprehensive facilities to computer programmers for software development. The language C is used to write the program and further uploaded to the Arduino.

**Hardware & Software to be used**

**Hardware Specifications**

|  |  |  |
| --- | --- | --- |
| Arduino Uno Board | Pulse rate sensor | LED |
| ESP8266-01 Wifi Module | Temperature Sensor | Connecting Wires |
| LCD Display | Resistor | Breadboard |

**Software Specifications**

1. Arduino Compiler
2. Programming Language: C

**What contribution would the project make?**

The project would contribute in ,

* To design a system to store the patient data over a period of time using cloud.
* To do analysis of collected data of sensors.

**The Schedule of the project : -**

The schedule of the project is estimated to be of **1 to 2 months** tentatively.

**References/Bibliography : -**

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