



# MUTHAYAMMAL ENGINEERING COLLEGE

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## IBM (Nalaiya Thiran) Project Ideas 2022

**SABITHA J (MECR19EC081)**

### **1. IoT Connected Healthcare Applications**

IoT technology spread its wings to the Medical sector to save many lives. The aim of developing this project is to monitor the health condition of a person anywhere and send the information to a specialized doctor to check up. Using this frequency of visiting doctor decreases. We developed a project using Wearable sensors with solar harvesting and Bluetooth low energy transmission that creates a wireless body area network (WBAN). Using this project you can detect the heartbeat, Blood pressure, hemoglobin content, etc., All these reports can be used for analyzing a person's health.

### **2. Smart Irrigation System Using IoT**

Every living organism needs food to live, We cannot imagine life without Irrigation. If everything gets automated even irrigation systems also need to be. We have developed a Smart Irrigation system using the concept of IoT. As we know farming has different stages, To help these farmers in understanding the climatic conditions, the moisture content in the soil and to make their decisions easy we have developed Smart Irrigation System using IoT. We used different sensors that sense temperature, moisture and humidity of the agricultural area. Information on all sensor nodes is collected by the ZigBee module and transmits the data to microcontroller connected with the wifi module that uploads the report on the cloud where a farmer can monitor those parameters in their Smartphones or PC on daily basis and take necessary steps to make their agriculture farm grow smart...

### **3. IoT based Water Quality Management System using Arduino**

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In this paper, we present a design and development of a low-cost system for real-time monitoring of the water quality management in IoT. The system consists of several sensors that are used to measure physical and chemical parameters in the water. The parameters such as temperature, PH, turbidity, the Level sensor of the water can be measured. The measured values from the sensors are processed by the microcontroller. The Nodemcu esp8266 is used as a core controller. Finally, the sensor data is uploaded on the internet using the WI-FI module.

### **4. IoT Based Fire Detection System Using FPGA**

Building a cloud-based Fire monitoring system is very important to reduce the cost of maintaining servers, to avoid data losses and to make access easy with multiple internet-connected devices ( computer, tablet, mobile phone) at the same time anywhere in the world. Using the Internet of Things (IOT). Here, we are going to design a fire detection system and data to upload it to a ThingSpeak cloud using FPGA



