IOT Weather Reporting System

Abstract:-

Here we propose a smart weather reporting system over the internet. Our proposed system allows for weather parameter reporting over the internet. It allows the people to directly check the weather stats online without the need of a weather forecasting agency.

System uses temperature, humidity as well as rain sensor to monitor weather and provide live reporting of the weather statistics.

The system constantly monitors temperature using temperature sensor, humidity using humidity sensor and also for rain. The system constantly transmits this data to the microcontroller, which now processes this data and keeps on transmitting it to the online web server over a Wi-Fi connection. This data is live updated to be viewed on the online server system. Also system allows user to set alerts for particular instances, the system provides alerts to user if the weather parameters cross those values. Thus the IOT based weather reporting system provides an efficient internet based weather reporting system for users.

Block Diagram:
### Hardware Specifications

1. ATmega328P AVR MC - Buy ATmega328P Online
2. DHT11 Digital Temperature Humidity Sensor – Buy DHT11 Sensor Online
   - a. Rain Drop Sensor - Buy Rain Drop Sensor Online
3. ESP8266 Wifi Module – Buy Wifi Module Online
4. LCD’s – Buy LCD Online
5. Crystal Oscillator – Buy Crystal Oscillators Online
6. Resistors – Buy Resistors Online
7. Capacitors – Buy Capacitors Online
8. Transistors – Buy Transistors Online
9. Cables & Connectors – Buy Cables & Connectors Online
10. Diodes – Buy Diodes Online
11. PCB – Buy PCB & Breadboards Online
12. LED’s – Buy LED Online
13. Transformer/Adapter – Buy Transformers & Adapters Online
14. Push Button – Buy Buttons & Switches Online

### Software Specifications:

- Arduino Compiler
- MC Programming Language: C
- IOTGecko