Project Synopsis

on

Sunlight Intensity Monitoring System

(Using IoT)

Under the guidance of

Mr. Saurabh Singhal

Department of Computer Engineering & Applications
Institute of Engineering & Technology

Submitted By:

Rishabh Gupta (181500563)

Aman Kumar (181500072)

Table of Contents

Title of the project

The title of the project is - **Sunlight Intensity Monitoring System (Using IoT)**

The Problem Statement:

There is a person who loves gardening so he spends some time in his garden and feel relax after his full day of tiring ans stressful job. He provides water to the plants, check the fertility and moisturization of the soil, but due to high temperatures in summer season, he worries about the health of his plants as he is at job during the day and for that he wants to track what amount of sunlight do the plants get in the whole day, so that he can take further measures to ensure the health of his plants. Therefore, we come up with the idea to develop the sunlight intensity monitoring system which will monitor the sunlight and stores the data on the cloud for further analysis. Then he will view this data in form of graph chart by loging into the cloud during his work.

Objective of the project:

The objective of the project is to build the monitoring system which will continuously keep track of the sunlight falling on the plants each day so that an individual can take further steps to ensure the health of the plants in the garden.

Methodology:

We will develop the sunlight monitoring system which will measure the sunlight continuously by using some electronic devices like light sensors, wifi module, resistor, bread board and stores the data on the cloud and then we will analyze the data using Machine Learning.

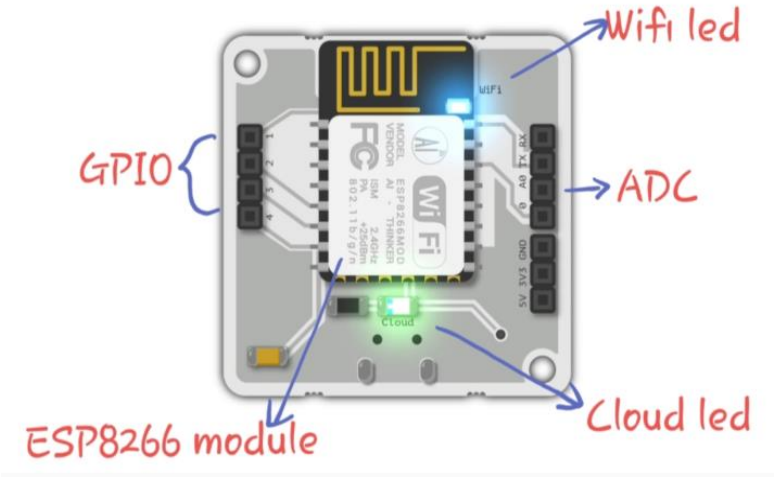
Hardware Used:

1. **Light dependent resistor (LDR):**

   It is also called as Light intensity sensor.
   It is an input device as it receives
   input in the form of sunlight.

2. Wifi Module:

- It has general purpose input/output pins (GPIO), analog to digital converter pin (ADC). It also has ESP8266 module which provides wifi connectivity to the cloud, it also connects to most of the wifi networks which work at 2.4 GHz frequency. It can also act as wifi router so that it can host its own wifi hotspot. ESP8266 operates at voltage of 3.3V and this wifi module is powered by 5V USB power adapter.
- It has 5 GPIO pins which are used to connect input and output devices to this wifi module.
- The functioning of ADC pin is to converts analog signals into digital signals in the form of bits.
- It has 2 LED indicators embedded on it - one is Cloud Led and the other is Wifi Led.
- Wifi led indicates about the connectivity of the module with the wifi and cloud led tells about the internet connection.



3. Resistor:

- It is 10k ohm resistor which is connected along with light intensity sensor on the bread board.

4. **Bolt Cloud:**

- The data which is collected by the wifi midule using light dependent resistor, will be stored to the cloud for further visualization of data.

Conclusion:

This project will be used to monitor the sunlight intensity continuously in the garden by fitting IoT devices which will sebd data to the cloud so that an individual can view data from cloud and take further steps required. In this way, our Project would be able to solve some real-life problems.