

README

Please unzip the submitted file to find the following:

File	Location in submitted folder
NodeMCU Code	5/Air_Quality
Requirements	5/Aiir_qulaity/requirements.txt
GUI/Web_App	5/Air_quality.html
Readme	/README.pdf
PPT	5/5.pdf

Steps to interface the NodeMCU ESP8266 with sensor and send data to deployed server:

1. Connect the 3v3 pin, GND pin, and A0 pin on the NodeMCU with VCC pin, GND pin, A0 pin on the MQ135 sensor respectively. Connect the NodeMCU to the laptop.
2. Install Arduino IDE and go to File -> preferences. Copy this URL:
http://arduino.esp8266.com/stable/package_esp8266com_index.json and paste it into Additional Boards Manager URLs.
3. Go to Tools-> Board -> Board Manager and install NTPClient, WifiClient, esp8266, ThingSpeak libraries by ESP8266 Community libraries.
4. Go to Tools-> Board -> Board Manager and select Generic ESP8266 Module. Also set 115200 as upload speed.
5. Open the Node_sketch in Arduino IDE.
6. Update the channel ID and write API key from Thingspeak.
7. Change the SSID and password to the SSID and password of your mobile hotspot.
8. Upload the code to NodeMCU.

The cloud server:

1. Create an account on ThingSpeak.
2. Create a channel for receiving data.
3. Make the channel public.
4. Copy the channel ID, read, write API keys.

Steps to deploy the Web App:

1. The web app is Air_Quality.html
2. Update the channel ID and read API keys for ThingSpeak.

Steps to test the project:

1. Turn on your mobile hotspot and connect the NodeMCU to a USB power source.
2. Then go to the deployed site.
3. You can see your node, its ID, the sensor values being and Air Quality.
4. If any sensor value crosses the range specified below it will update the Air Quality.

The web app create has also been hosted at the following address:

<https://github.com/chahitgawre?tab=repositories>