Weather Station Project

- Submitted by: Manish Kumar Yadav
- M.Sc. IT - Part II, Semester III
- Shailendra Degree College
- Guide: Asst. Prof. Hemchandra Kumbhar

Introduction

- • This project aims to build a Weather Station using IoT.
- • It captures temperature and humidity data using sensors.
- • The data is visualized on a cloud platform.

Description of System

- • Uses Arduino UNO as the microcontroller.
- • DHT11 sensor captures humidity and temperature & LED Display.
- • Data is sent to the cloud for remote access.

Limitations of Present System

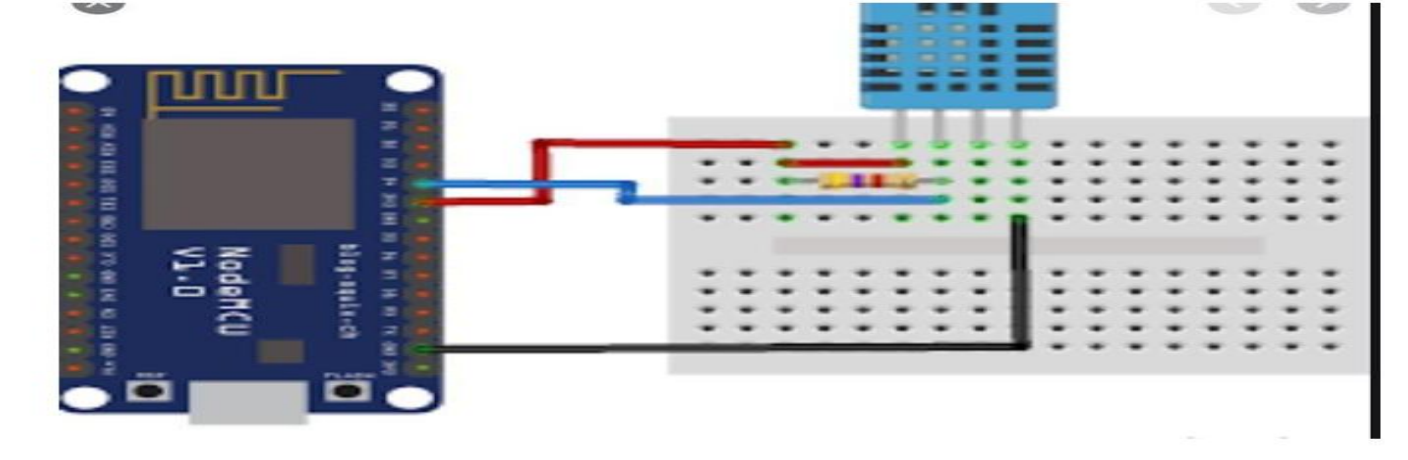
- • Slower processing time.
- • Requires additional devices for operation.
- • Complex programming for microcontrollers.

Proposed System & Advantages

- • **Low-cost and energy-efficient solution.**
- • **Uses NodeMCU and cloud-based storage.**
- • **Provides real-time weather monitoring.**

System Design & Implementation

- • Hardware: NodeMCU, DHT11, Jumper Cables, Breadboard.
- • Software: Arduino IDE, Thingspeak cloud platform.
- • Circuit designed for accurate data capture.



Results & Data Visualization

- • Test cases confirm system functionality.
- • Data is exported in CSV format for analysis.
- • Graphical visualization in Excel or Python.

ThingSpeak™ Channels Apps Support Commercial Use How to Buy MK

Weather Station

Channel ID: 842407
Author: mk782209
Access: Public

daily reading of temperature and humidity in Dahisar East
temperature, humidity, dahisar east

Private View | Public View | Channel Settings | Sharing | API Keys | Data Import / Export

Add Visualizations | Add Widgets | Export recent data | MATLAB Analysis | MATLAB Visualization

Channel Stats

Created: 8 months ago
Last entry: 2 minutes ago
Entries: 379

Field 1 Chart

Field 2 Chart

Temperature

Humidity

Channel Location

Channel Status Updates

Future Enhancements & Conclusion

- • Addition of sensors for air quality and wind speed.
- • Integration with mobile apps for real-time alerts.
- • Useful for farmers and environmental monitoring.