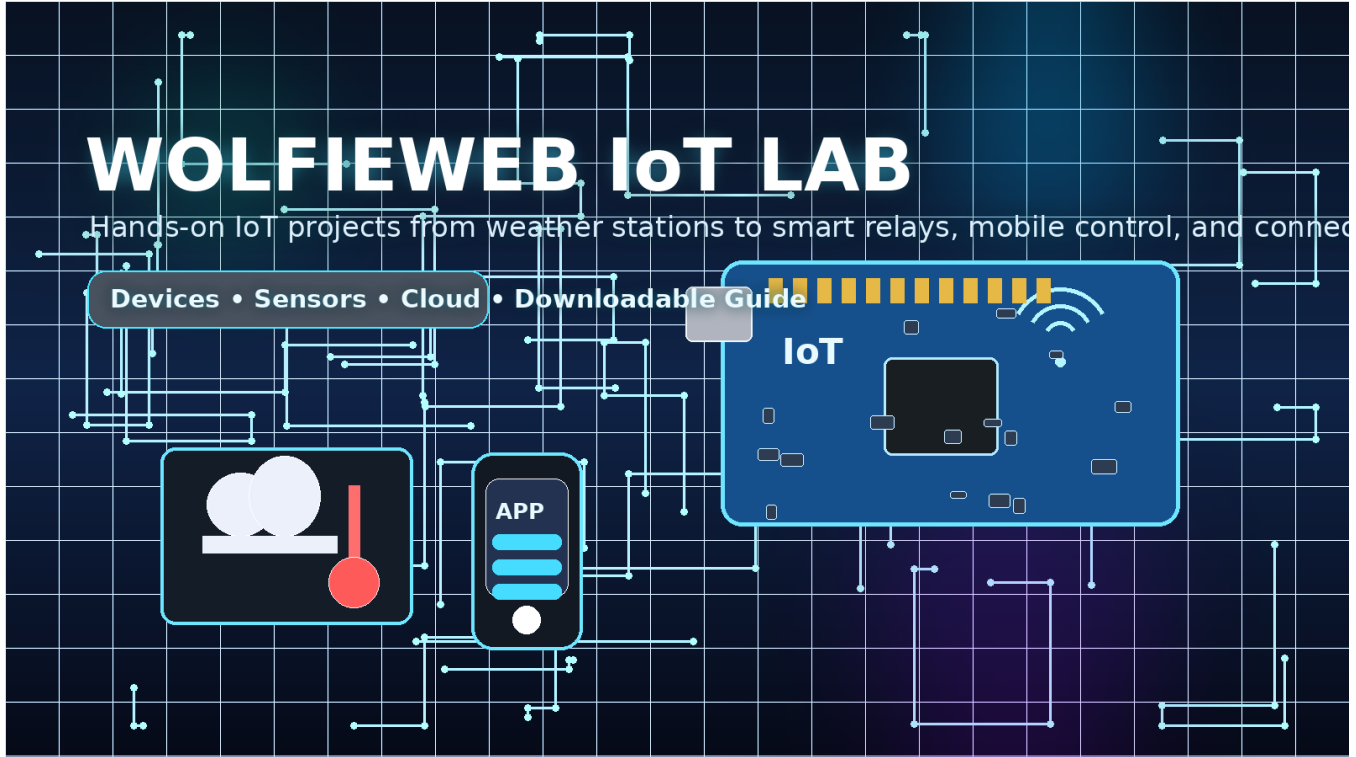


WolfieWeb IoT Project Guide

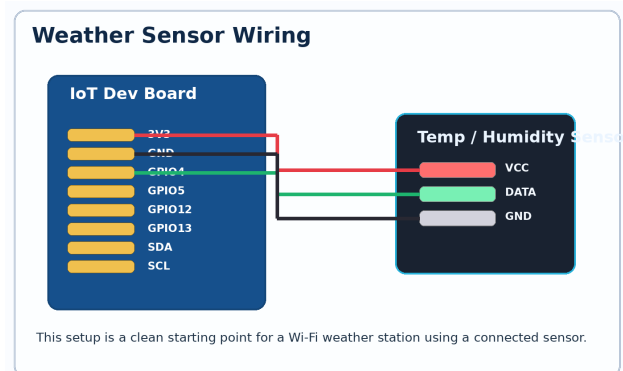
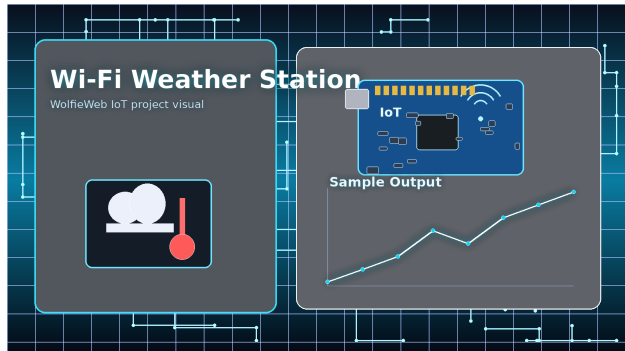
A printable IoT starter pack with project visuals, wiring references, practical code, and troubleshooting notes.



What this pack includes	High-res page graphics, embedded-video layout, and a downloadable PDF with connected-device projects.
Best beginner path	Start with the weather station, then smart relay, then MQTT sensor node, then mobile app control.
What beginners usually get wrong	Weak power, bad Wi-Fi setup, confusing pins, poor ground connections, and trying to connect to the wrong IP.

1. Wi-Fi Weather Station

This project turns a small dev board into a live sensor station that can send readings over Wi-Fi. It is a strong entry point because it combines sensing and networking without getting too complicated.



Starter code

```
#include <WiFi.h>
#include "DHT.h"

#define DHTPIN 4
#define DHTTYPE DHT11
DHT dht(DHTPIN, DHTTYPE);

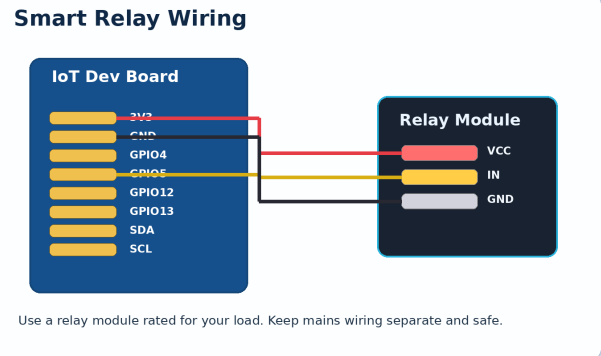
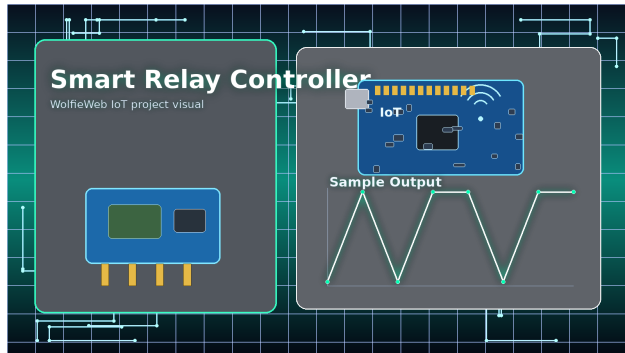
void setup() {
  Serial.begin(115200);
  dht.begin();
}

void loop() {
  float temp = dht.readTemperature();
  float hum = dht.readHumidity();
  Serial.print("Temp: ");
  Serial.print(temp);
  Serial.print(" Humidity: ");
  Serial.println(hum);
  delay(2000);
}
```

Troubleshooting: If readings fail, verify the data pin, give the board stable power, and check that the sensor really matches the code library.

2. Smart Relay Controller

A relay build lets your IoT project control something real. Start small and safe with low-voltage devices before you even think about anything larger.



Starter code

```
const int relayPin = 5;

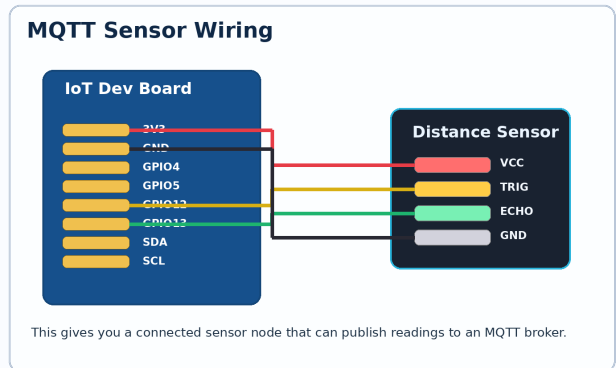
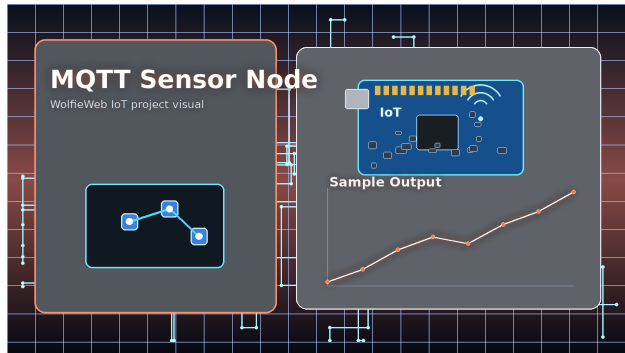
void setup() {
  pinMode(relayPin, OUTPUT);
}

void loop() {
  digitalWrite(relayPin, HIGH);
  delay(2000);
  digitalWrite(relayPin, LOW);
  delay(2000);
}
```

Troubleshooting: Relay modules can be active-low or active-high. If the logic feels backwards, that is usually the reason.

3. MQTT Sensor Node

MQTT is one of the cleanest ways to move sensor data between connected devices. This is where hobby IoT starts feeling like a real system.



Starter code

```
// Pseudocode layout
connectToWiFi();
connectToMQTT();

loop() {
  float reading = getSensorReading();
  publish("wolfieweb/sensor/value", reading);
  delay(3000);
}
```

Troubleshooting: If nothing publishes, check Wi-Fi first, then broker address, then topic names. Beginners often change two things at once and lose track.

Mobile control and connected camera notes

The mobile app project shows the payoff of IoT: controlling a device from somewhere else. The connected camera concept pushes that one step further by mixing sensors, data, and visual monitoring. Those projects are good later steps after you understand wiring, Wi-Fi connection, and stable power.

