Sprint 1 – Mold Risk Monitor

AI-Driven IoT System Development

Idalia Martin

Objective

- Learn how to interface a sensor with ESP32
- Collect temperature and humidity data
- Understand I2C communication

What I Built

- ESP32 (XIAO ESP32-C6)
- AHT10 temperature & humidity sensor
- I2C communication setup
- Real-time data output

System Overview

- Sensor collects environmental data

- ESP32 reads data via I2C

- Data displayed in Serial Monitor

- Updates every 2 seconds

Results

- Successfully read temperature and humidity
- Example:
  - Temperature: ~74°F
  - Humidity: ~25%
- Data shows patterns over time

Challenges

- Wiring issues (3.3V connection)

- I2C not detected initially

- Pin mapping confusion

- Library installation issue

Next Steps

- Build web dashboard

- Visualize trends

- Add humidity alerts

- Connect ESP32 to WiFi

Thank You

Any questions?