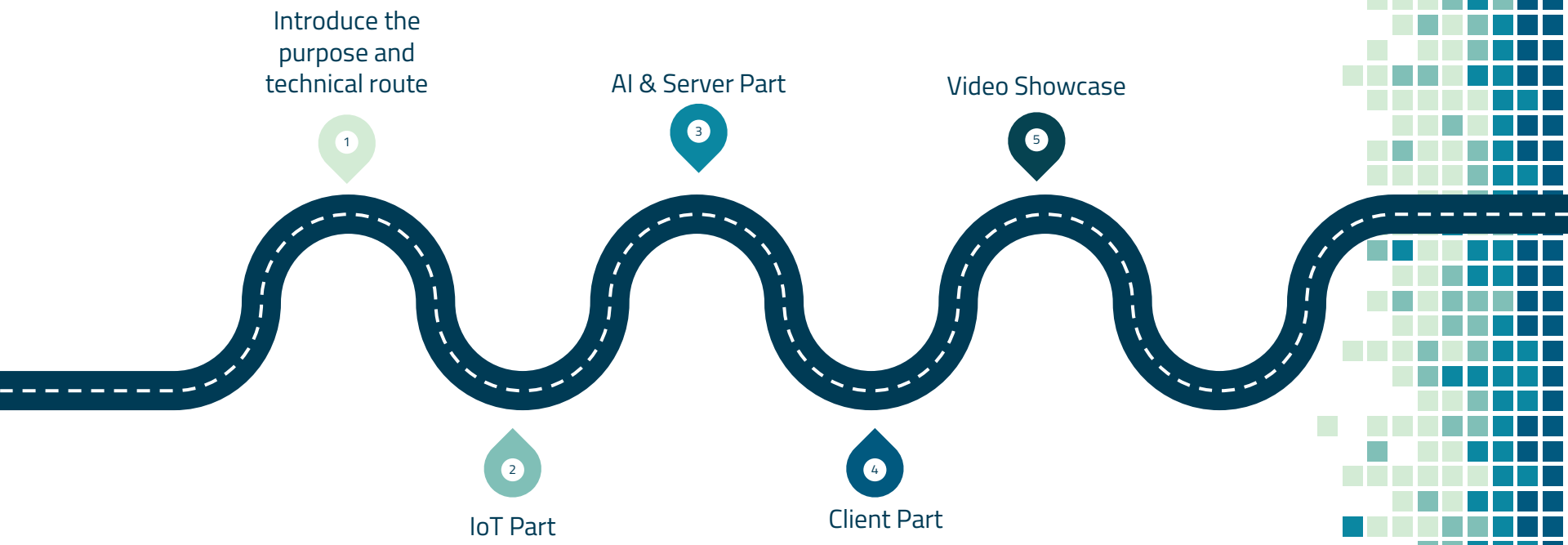
Group3
Project Presentation

Presented to you by:
Yunyi Zhou, Zijie Xin, Gaoyuan Wang

Voice-Controlled & Environment Detection Air Conditioning System

Proposal Agenda



1.
Introduce the purpose and technical route

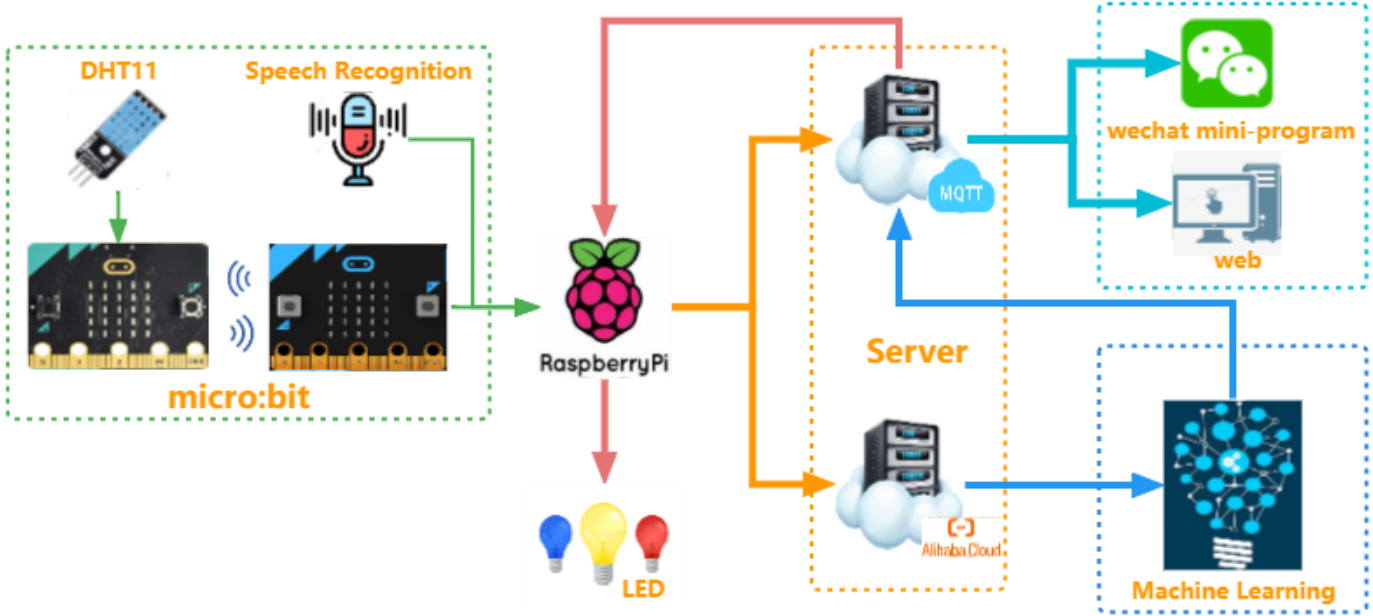
Purpose and Technical Route

Brief Introduction

- Our project mainly focused on environment detection air conditioning system.
- The collected data will be used to training the AI model.
- We designed website and WeChat mini-program as frontend.
- Three led lights are connected to the Raspberry Pi, representing the status of fan and the model of air-conditioner.

Purpose and Technical Route

- **Technical Route**



2.
IoT Part

IoT Part

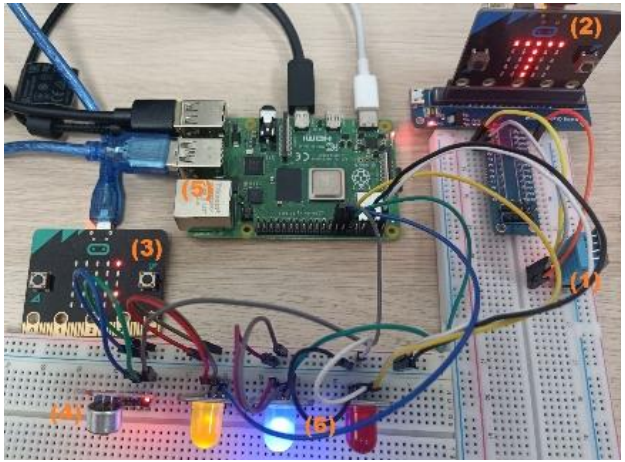
Micro:bit

- ✓ DHT11 sensor
- ✓ Radio communication between two Micro:bits
- ✓ Uart Transmission to Raspberry Pi

IoT Part

Raspberry Pi

- ✓ MQTT Server Communication
- ✓ Web Server Communication
- ✓ Voice Command Detection
- ✓ LED Priority Control

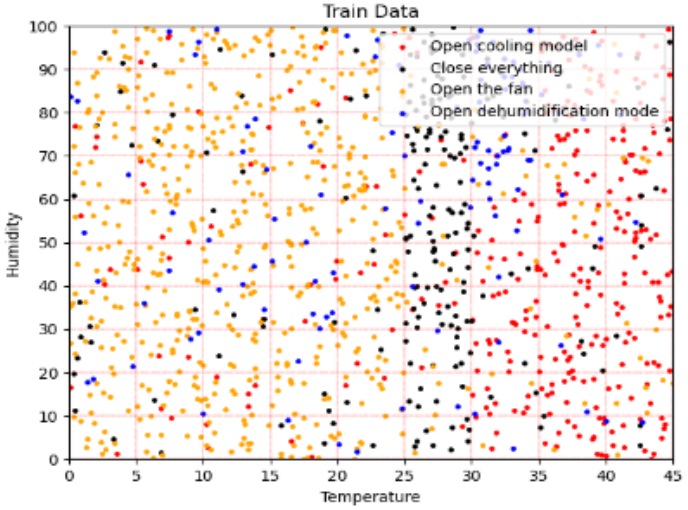


3.
AI & Server Part

AI & Server Part

Machine Learning Model

- ✓ Support Vector Machine
- ✓ Data Received From Web Server
- ✓ Command Sended by MQTT



AI & Server Part

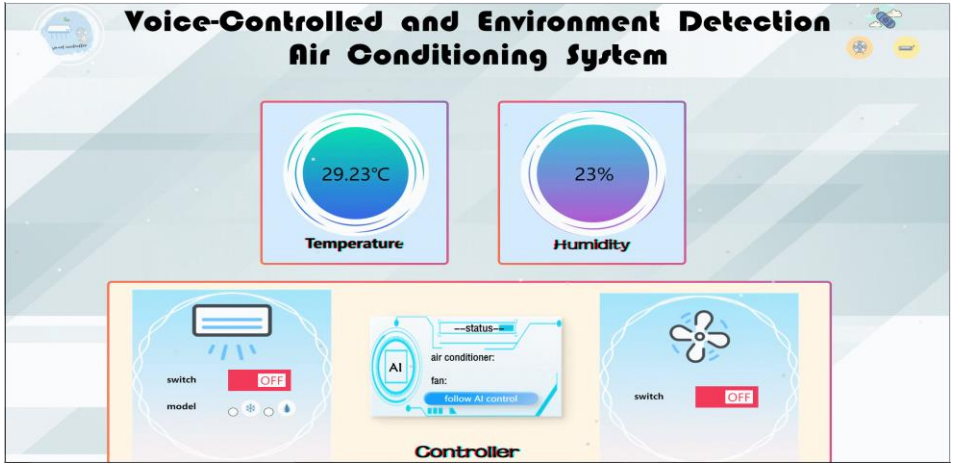
MQTT & Web Server

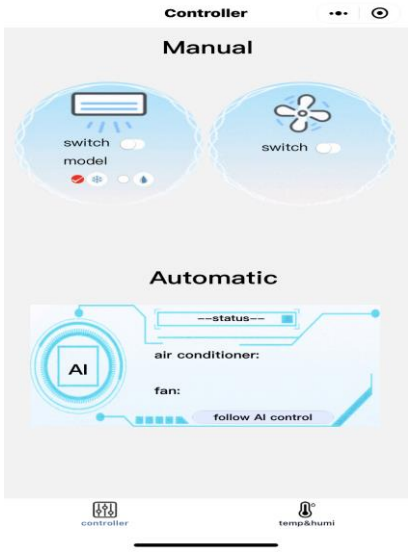
- ✓ MQTT Topic
- ✓ Commands Sent by MQTT
- ✓ Data Recorded on Web Server
- ✓ Website can be Accessed by Web Server

4.
Client Part

Website

http://gaoyuanwang.top:8080/microbit



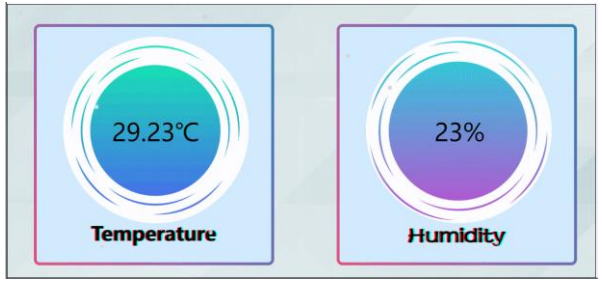


Wechat mini-program

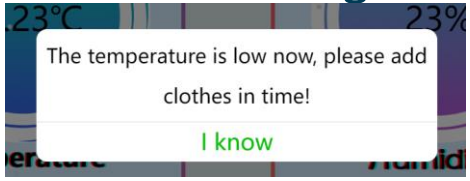
Client Part

Display

- ✓ Temperature and Humidity



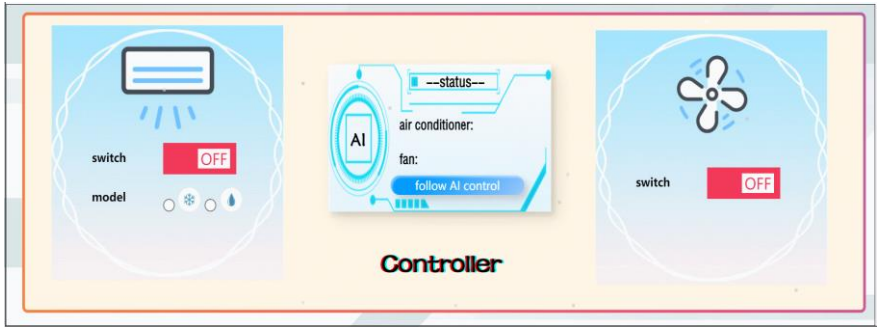
- ✓ Alert when the temperature is below 18 degrees



- ✓ Get data from mqtt server

Client Part

Controller



- ✓ fan : switch
- ✓ Air conditioner : switch & model
- ✓ AI control situation &butoon to quit manual control
- ✓ Send order to mqtt server

5.
Video Showcase

Q&A

Thanks for Listening!

https://github.com/Gaoyuan-Wang/P03_Project