James Young

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EDUCATION

The Hong Kong University of Science and Technology — Hong Kong
BEng in Electronic Engineering — *Sept. 2020 – Present*

RELEVANT COURSEWORK

- Intro. to Computer Science
- Programming with C++
- Object-Oriented Programming and Data Structures
- Intro. to Computer Organization and Design
- Electro-Robot Design
- Introduction to Embedded Systems
- Computer Communication Networks

WORK EXPERIENCE

IoT Intern | Graphite Venture Limited 🔗 — December 2022 – May 2023
C++, ESP32, Arduino — *(Full and Part Time)*

- Developed Arduino libraries for reading water sensor data with ESP32 and sending sensor data to AWS through MQTT with a SIM7600G module.
- Created an Arduino library for communicating to multiple ESP32 with ESP-Now protocol.

PROJECTS

Mini Robot Cleaner 🔗 | *C, STM32, Python*

- Created a robot car with a STM32 board that can be wirelessly controlled through UDP transmissions and also has an automatic free roam mode
- Integrated the bubble rebound algorithm for avoiding obstacles in free roam mode using 3 ultrasonic sensors
- Used Python and PyQT5 to create a GUI for controlling the robot wirelessly

| *Python*

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HTTP 1.1 Web Server 🔗 | *C*

- Created a simple HTTP 1.1 web server in C that is able to serve static web pages and images to a client's web browser.
- Uses concepts of socket programming to connect client and server and HTTP protocol to serve files.

SKILLS

Programming Languages: C, C++, Python
Tools/Software: Git, Linux
Languages: English (Native), Mandarin (Conversational)

EXTRACURRICULAR ACTIVITIES

- HKUST Football Team — Jan. 2021 - Present