# JAMES YOUNG

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## EDUCATION

**The Hong Kong University of Science and Technology**                    **2020 – Present**
- BEng Electronic Engineering

## RELEVANT COURSEWORK

- Intro. to Computer Science
- Programming with C++
- Object-Oriented Programming and Data Structures
- Computer Communication Networks
- Introduction to Computer Organization and Design
- Matrix Algebra and Applications

## SKILLS

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

## PERSONAL PROJECTS

### HTTP 1.1 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.

### Mini Robot Cleaner ⤢ | C, 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 GUI for controlling the robot wirelessly

### Tic-Tac-Toe with Minimax ⤢ | C++
- Created a terminal tic-tac-toe game with option to either play against AI or another person.
- AI uses minimax algorithm to determine the best move each turn. Used tree data-structure for storing different board states in each turn.

## Work Experience

**IoT Intern | Graphite Venture Limited ⤢**                    **December 2022 – May 2023**
- Developed Arduino libraries for reading water sensor data with ESP32 and sending sensor data to AWS IoT Core through MQTT with a SIM7600G module.
- Created an Arduino library for communicating to multiple ESP32 with ESP-Now protocol.

## Extracurricular Activities

- **HKUST Football Team**                    **January 2021 - Present**
- **Project C - Connect x Community (Volunteer Program)**                    **October 2020 - February 2021**