

James Young

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EDUCATION

The Hong Kong University of Science and Technology
BEng in Electronic Engineering - Minor in Information Technology

Hong Kong
Sept. 2020 – Present

RELEVANT COURSEWORK

- Programming with C++
- Object-Oriented Programming and Data Structures
- Intro. to Computer Organization and Design
- Computer Communication Networks
- Deep Learning in Computer Vision
- Machine Learning and Information Processing for Robotics

SKILLS

Programming Languages: C++, Javascript, Python, SQL (Postgres), HTML/CSS

Tools/Platforms: Git, Docker, Linux, AWS

Languages: English (Native)

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.

Electronic Engineering Intern | Kolour Think Tank

August 2023

- Developed a digital utility meter reader that takes images of a utility meter with an ESP32-CAM, sends the image to AWS S3, reads the meter reading with AWS Rekognition, and stores the data in AWS DynamoDB.

PROJECTS

Mini Robot Cleaner 🔗

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

To-Do List 🔗

- Created a to-do list website using Django framework with user authentication.
- Deployed Django application on an AWS EC2 instance with Docker using Gunicorn, Nginx-Proxy, Letsencrypt, and Postgres as database.

Tic-Tac-Toe with Minimax 🔗 |

- 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.

EXTRACURRICULAR ACTIVITIES

- HKUST Football Team

Jan. 2021 - Present