

# James Young

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## EDUCATION

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**The Hong Kong University of Science and Technology**

Hong Kong

*BEng in Electronic Engineering - Minor in Information Technology*

*Sept. 2020 – June 2024*

## SKILLS

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**Programming Languages:** Python, C++, Javascript

**Tools/Platforms:** Linux, Git, Docker, Ansible, Jenkins, Terraform, Kubernetes

**Cloud:** AWS (DynamoDB, Lambda, EC2, S3)

## WORK EXPERIENCE

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**Software Developer Intern | Intelligent Design Technology** *December 2023 – February 2024*

- Developed a prototype for real-time human fall detection for a Raspberry PI based robot.
- Fall detection uses Tensorflow and Movenet for pose estimation and heuristics for determining fall.

**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, stores images to AWS S3, reads the meter reading with Rekognition, and stores the data in DynamoDB.

**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.

## PROJECTS

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### Air Quality Monitoring Dashboard

- A fullstack project that stores and displays my home's air quality sensor data using AWS services.
- Data is stored and retrieved on DynamoDB using REST API with API Gateway and Lambda. Front-end uses HTML, CSS, and Javascript.

### Home Server

- Built home server running Proxmox for self-hosting services and applications such as Nextcloud using Linux containers and virtual machines.
- Applied various tools such as Docker for containerization, Grafana for monitoring, and Ansible for automation.

### Mini Robot Cleaner

- Created a robot car cleaner with a STM32 board written in C that can be wirelessly controlled through UDP or can roam autonomously
- Integrated the bubble rebound algorithm for avoiding obstacles in free roam mode
- Used Python for socket programming and PyQt5 to create GUI to control robot wirelessly

## EXTRACURRICULAR ACTIVITIES

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- HKUST Football Team

Jan. 2021 - June 2024