

Education

The University of Hong Kong | *Bachelor of Engineering*

Sep 2021-May 2025

- **Major:** Computer Science | **Minor:** Finance
- **Awards:** Full Scholarship
- **Roles:** HKU Student Ambassador, HKU Equal Opportunity Ambassador.
- **Highlight Courses:** Data Structures and Algorithms, OOP & Java, Computer Programming II in C/C++, Linux Systems and Shell Scripts, Discrete Mathematics, Full Stack Web-Development, Computer Architecture and Organization, Artificial Intelligence

Professional Experience

TCL Technology, *Software Engineer*.

Apr 2023 – Present.

- **Developed optimized data structures** to enable the company's graph neural network machine learning model to perform dynamic material predictions efficiently. This reduced continuous model calls and minimized server overload for researchers by 40%.
- **Single-handedly created a secure web platform**, utilizing an interactive React frontend and a Flask API backend, to serve the graph neural network model services for in-house usage across all company branches.
- **Containerized servers into Docker containers** and implemented Cloudflare and Nginx proxy to host the web service over a secure domain with a localized server system running on in-house company machines, hence providing a secure platform to **host confidential in-house ML/AI models** without model exposure.

Move It Move It Limited, *Artificial Intelligence (AI) Engineer*

Dec 2022 – Jan 2023.

- **Developed custom datasets** for AI Model Training using real-life images processed through Roboflow with class-based annotations.
- **Seamlessly implemented AI** using the **YoloV8 Algorithm** to train on large custom datasets for personalization of the model to furniture-detection with a 60% accuracy so far, as well as infused model modification for version storage.
- **Integrated PyTorch along with Comet AI** to store experiment models and for version control of AI model to support fine-tuning and transfer learning, hence enabling version comparisons and fluid transition between testing models.
- **Incorporated Nvidia Isaac Sim into generation of synthetic data** to construct custom artificial datasets for fine-tuning training model with unusual scenarios and aid active learning, thus almost doubling the AI detection capabilities for unusually designed furniture.

Key Direction Limited Consultancy, *Data Analysis Intern*.

May 2022 – Aug 2022.

- **Data Analysis and Mining** for Singapore Railways LRT, to analyze maintenance of systems and handle maintenance data.
- **Designed Automation Processes** to handle large data sets and filter data into sequential storage files using Python and related libraries reducing manual data entry time by around 80%.
- **Increased website interactivity** by implementing a user connectivity dashboard using React Admin, Ant Design Pro, Bootstrap, MUI.

Highlight Projects

GPAid Alpha HKU | *A guide to HKU Course Selection and Semester Planning with AI-based GPA Estimation Service*

[Visit Git Repo](#) | [Watch Demo](#)

- **Utilized Web Scarping with API call interceptions** to extract course review and grade data from several websites to build a large database.
- **Performed sentiment analysis** using Natural Language Processing with the Roberta Model along with nltk, huggingface transformers, and pandas data frame to produce sentiment positivity scores from student reviews for insight on course workload and attitude.
- **Constructed a regression model with numpy**, along with matplotlib to generate a grade-review-sorting factor to be used to sort courses by order of best grades, by order of best student reviews, and provide GPA estimation using regression model extrapolation.
- **Capitalized React, Chakra UI Library**, alongside ChartJs, react-paginate and ParticlesJs to make the UI more comprehensive and user-friendly.

Interview-Me | *A One-Stop app for interview preparation and portfolio management with AI screening and feedback*

[Visit Git Repo](#)

- **Architected an AI feedback system** to parse resume and cover letter texts to generate feedback; allow for multiple version storage.
- **Integrated a mock-interview interface** with a range of interview questions allowing video recording and response storage using AWS S3, as well as providing personalized constructive advice on the video response, movement, and posture during response capture.
- **Fine-tuned AI Model to support portfolio management** for multiple job fields along with personalized AI generated responses, as well as developed a database of specialized interview preparation kit for users to improve their interview skills.

Scrape-It | *A RESTful API Server for Facebook, Instagram, and Openrice scraping*.

[Visit Git Repo](#) | [Watch Demo](#)

- **Developed a Flask App** using python, including selenium, chromedriver, pandas, lxml, beautifulsoup and several python modules.
- **Incorporated Jinja2 with CSS, Bootstrap, JavaScript and HTML** to make an interactive server platform to handle user requests.
- **Built task-queue managers to connect backend to frontend** and take in user requests from frontend, and store in backend, as well as inspect backend queue for pending tasks and perform scraping in bulk at once, reduce server traffic by 50%.

Notable Awards and Activities

See More at: [My Web Portfolio](#)

Greater Bay Area FinTech Talent Initiative training under Goldman Sachs and Bloomberg | Among the selected 15 candidates of Goldman Sachs.

Laidlaw Scholarship 2022-2023 | Selected among top 25 researchers from 2500+ applicants from top world universities (Oxford, Leeds, etc.).

HKU Foundation Scholarship, *Full Tuition* | Scholarship covering Full Tuition for the entire study period.

HKU Student Ambassador (since 2021) | Represent HKU at major events, attend school visits and social activities as a representative of HKU.

Skills

Core: Python, JavaScript, Java, TypeScript, C, C++, C#, R Language, Shell (Scripting), Linux/Unix, AWS

Web App and Database: React, Vue.JS, React Native | NodeJS and Express | SQL, MongoDB, SQLite, Postgres, SQLAlchemy | Docker

Machine Learning and AI: Regression, Transfer Learning, Fine-Tuning, Computer Vision, Neural Networks