Daniel Tsiang

Surrey Quays, London, SE16 7FH | +447533940356 | dan_tsiang@hotmail.co.uk |
https://danieltsiang.github.io

EDUCATION

Harvard University   **Remote**

HarvardX CS50ai & CS50x: Jan 2021 – Dec 2021
Computer Science with Artificial Intelligence using Python ([certificate](#))

- Created AI programs to play Minesweeper, Tic-Tac-Toe and Nim games optimally.
- Trained Machine Learning models to recognise traffic signs and predict online purchases completion.
- Wrote Natural Language Processing programs to answer questions and parse sentences.
- Coded AI programs to generate crossword puzzles, estimate genetic inheritance likelihood, rank webpages by importance, solve logic puzzles and determine degrees of separation.
- Created scripts in C to encrypt text, recover data after deletion & transform images. I also simulated elections, genetic inheritance and implemented a spell checker using a hash table.

Imperial College London   **London**

Master of Engineering in Chemical with Nuclear Engineering (First-Class)   Oct 2014 – Jun 2018

- Led a team of 4 to design a reactor model using MATLAB and to mitigate upstream disturbances.

WORK EXPERIENCE

Starling Bank   **London**

Software Engineer   Aug 2021 – Present

- Developed the backend for Python apps which serve image recognition Machine Learning (ML) models.
- Deployed ML models into production by running Python apps in Docker containers and orchestrating them with Kubernetes. I then linked these to the backend Java platform through REST APIs.
- Optimised Kubernetes resource allocation to achieve efficient performance of containers serving ML models.

AWE   **Reading**

Nuclear Safety Engineer   Sep 2018 – Aug 2021

- Authored and reviewed safety documentation. Analysed risks to improve hazard management.

PROJECTS

Traffic Sign Classifier *([demo](#))*   Jan 2022

- Created a single-page web app serving a machine learning model I trained which classifies traffic signs.
- Orchestrated Flask, NGINX and TensorFlow Serving Docker containers using Docker Compose.

Stock Simulator *([demo](#))*   Apr 2021

- Designed & built a RESTful web app using Python with Flask's MVC framework, connected to a SQL database and served by Gunicorn.
- The web app simulates managing portfolios of stocks, using real stocks' prices by querying an API.
- AJAX calls are made from JavaScript to update data displays and validate data in real time.

SKILLS

- **Programming Languages:** Python, Java, JavaScript (plus CSS & HTML), SQL, C
- **Programming Frameworks / Tools:** Docker, Kubernetes, Flask, TensorFlow, Git
- **Spoken Languages:** English (Native), Cantonese (Proficient), Mandarin (Conversational)