

Daniel Tsiang

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<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.
- Collaborated with a team of 10 to design and financially plan an aspartame (sweetener) production plant starting from raw ingredients. I developed the safety and control system for the plant.

WORK EXPERIENCE

Starling Bank

London

Software Engineer

Aug 2021 – Present

- Developed the backend for Python web apps which serve image recognition machine learning models, run in Docker containers orchestrated by Kubernetes.

AWE

Reading

Nuclear Safety Engineer

Sep 2018 – Aug 2021

- Authored and peer-reviewed safety documentation, ensuring the quality meets high nuclear standards.
- Analysed risks and provided recommendations 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.
- Made AJAX calls 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, Flask, TensorFlow, jQuery, Git
- **Spoken Languages:** English (Native), Cantonese (Proficient), Mandarin (Conversational)