Daniel Tsiang

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Experience

Starling Bank   *London*
Software Engineer   *Aug 2021 – Present*

- Developed the backend and CI tests for Python apps which serve image recognition ML models.
- Deployed ML models into production by running Python apps in Docker containers and orchestrating them with Kubernetes. Created Java classes in the banking platform to consume models via REST APIs.
- Trained and deployed ML models on GCP Vertex AI.
- Set up error monitoring to track and quickly resolve bugs, thus maintaining healthy apps in production.
- Optimised Kubernetes resource allocation and monitored pods to achieve efficient performance of containers serving ML models.

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 and 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.

Education

Harvard University   *Remote*
HarvardX CS50ai & CS50x: Computer Science with Artificial Intelligence using Python   *Jan 2021 – Dec 2021*

- 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 e.g. to transform images 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, used to mitigate upstream disturbances.

Skills

Programming	Python, Java, JavaScript (plus CSS & HTML), SQL, C
Libraries	Flask, TensorFlow, Scikit-learn, NumPy, Pandas, PyTest
DevOps	Docker, Kubernetes, Git
Cloud	GCP, AWS
Data Engineering	Dataflow (Apache Beam), Kubeflow
Databases	PostgreSQL, SQLite

Certifications

2022   **Google Cloud Big Data and Machine Learning**, Coursera (certificate)