Daniel Tsiang

London, UK

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Experience

Starling Bank — *London*

Software Engineer — *Aug 2021 – Present*

- Integrated Google AI APIs directly into the Java banking platform to boost customer operations efficiencies and detect fraud.
- Developed the backend, unit & integration tests for Python apps and packages serving Machine Learning (ML) models.
- Deployed ML models into production by running microservices in Docker containers and orchestrating them with Kubernetes.
- Created simulator in Java to put ML services under constant traffic, allowing load testing and automated response validation.
- Trained and deployed ML models on Google Cloud (GCP) to serve online predictions with low latency.
- Created serverless event-driven AWS Lambda to sync files between S3 and Cloud Storage using keyless cross-cloud auth.
- Automated data ingestion & processing pipelines by writing Bash CI/CD pipelines to create templates for GCP Dataflow jobs.
- Exposed Prometheus metrics and created Grafana dashboards to monitor app and ML model performances, allowing detection of model drift and adhering to MLOps best practices.
- Added automatic security vulnerability scanning of code, with GitHub and Slack integrations for alerts.

Projects

Traffic Sign Classifier (demo) — *Jan 2022*

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

Stock Simulator (demo) — *Apr 2021*

- 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.
- Designed UI to update data displays and validate data in real time by making AJAX calls from JavaScript.

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.
- Developed AI programs to generate crossword puzzles, rank webpages by importance and solve logic puzzles.

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, SQL, C, Bash
Libraries	Flask, TensorFlow, Scikit-learn, NumPy, Pandas, PyTest
DevOps	Docker, Terraform, Grafana, Prometheus, Kubernetes, Git
Cloud	GCP, AWS
Data Engineering	Dataflow (Apache Beam), Kubeflow
Databases	BigQuery, PostgreSQL, SQLite

Certifications

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