YUCHAO FAN

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Cambridge Economist & self-taught programmer.
Interested in solving quantitative problems and building great products.

EDUCATION

University of Cambridge   Oct 2019 - July 2022

BA Economics: Upper second-class honours (68.2%), ranked 50/152

- Coursework: advanced econometrics, advanced game theory, linear algebra, probability theory, macroeconomics, microeconomics. Also self-studied computing and mathematics modules from the Engineering Tripos.
- Activities: Caius Boat Club M3, Caius Table Tennis Society, Hackbridge.io

QEH Bristol Secondary School   Sep 2012 - July 2019

- A*A*A*A*A at A-level in maths, further maths, physics, economics and Chinese.

EXPERIENCE

Amazon   Aug 2022 - Jan 2023

Data Engineer (BIE) Intern

- Built ETL pipelines and deployed code into production for Amazon's core shipping metric platform, processing data at the petabyte scale. I also resolved numerous tickets from users regarding change requests and bug fixes.
- Collaborated with another intern to develop a serverless, event-driven architecture that enabled unit-testing of highly complex SQL ingressions, as to avoid affecting production clusters. Our codebase was written in Python and TypeScript, whilst our infrastructure was built using Docker and the AWS CDK. We leveraged numerous AWS services such as Redshift, Lambda, S3, SQS, API Gateway, EventBridge and DynamoDB.

PreWarp   Aug 2021 - Sep 2021

Data Analytics Intern

- Built a Python dashboard with animated visualisations using Streamlit, Pandas and Plotly to serve as the prototype frontend for PreWarp's optimisation models. Also used Requests to web-scrape missing geographical data.

Schroders   Aug 2020

Spring Intern (delayed due to Covid-19)

- Learned about the fundamentals of asset management and participated in team-based trading simulations.

SKILLS

Languages	Python (scikit-learn, pandas, NumPy, Matplotlib etc.), SQL, Stata, TypeScript
Technologies	AWS, Spark, Git, Linux, Docker, REST APIs
Other Interests	Martial Arts Tricking, Classical Piano, Classical Guitar. Bilingual in Mandarin and English.

PROJECTS AND COMPETITIONS

SQLGlot (Contributor)   Dec 2022

- Onboarded Redshift parsing to SQLGlot, an open-source Python package developed by staff engineers at Airbnb.

RECON Hackathon (Amazon Internal)   Sep 2022

- Led the development of a SQL parser and visualiser for table lineage, based on regex and graph theory.
- Upon presenting our completed tool to a panel of senior engineers, we were commended for a strong level of execution and completion. The tool has been widely adopted across the entire team.

Dissecting the dot-com bubble in the 1990s NASDAQ (Final Year Dissertation)   May 2022

https://arxiv.org/abs/2206.14130

- Applied recent advances in time series methods (unit root tests for explosive processes) to a large dataset of stock prices and fundamentals using Python and Stata, producing new and robust results.
- Achieved a first-class mark of 76% and was selected by the Marshall library as one of the top dissertations across the cohort.

British Mathematical Olympiad   Nov 2018

- Achieved Distinction in BMO1, scoring in the top 25%.