

# YUCHAO FAN

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Cambridge Economist and self-taught programmer, interested in solving quantitative problems

## EDUCATION

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**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, statistics, probability theory, forecasting, causal inference, constrained optimisation, macroeconomics, microeconomics.
- Activities: Caius Boat Club M3, Caius Table Tennis Society, Hackbridge.io

## SKILLS

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**Languages** Python (pandas, NumPy, Matplotlib, statsmodels 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.

## EXPERIENCE

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**Amazon**

Aug 2022 - Jan 2023

Business Intelligence Engineer Intern

- Implemented ETL pipelines for Amazon's second largest metric platform, processing data at the petabyte scale.
- Collaborated with another intern to develop a serverless, event-driven architecture that enabled dockerised unit-testing of highly complex SQL ingressions, as to avoid affecting production clusters. We built our project using numerous AWS services such as Redshift, Lambda, S3, SQS, API Gateway and DynamoDB, with the codebase comprising mainly Python and TypeScript.

**PreWarp**

Aug 2021 - Sep 2021

Data Analytics Intern

- Built a Python dashboard using Streamlit to serve as the prototype frontend for PreWarp's optimisation models.
- Generated animated data visualisations using Plotly and Pandas, and improved the data pipeline by web-scraping missing data.

## PROJECTS AND COMPETITIONS

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**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.
- Produced new and robust results, achieving a high first-class mark of 76%.
- Selected as one of the seven top dissertations across the cohort to be displayed in the Marshall Library.

**British Mathematical Olympiad**

Nov 2018

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