

Siqi Shen (Coco)

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Education

09.2021 - 07.2022 MSc Financial Mathematics, London School of Economics, London

- **Core modules:** Stochastic calculus, Computational Finance, Probability and Measure Theory, Black-Scholes theory of financial markets, Numerical Pricing Method, Enterprise Risk Management

09.2018 - 07.2021 BSc Mathematics and Economics, London School of Economics, London

- Degree Awarded: First Class Honour
- **Core modules:** Mathematical Methods, Real Analysis, ODE, Econometrics, Microeconomics, Statistics

09.2014 - 06.2018 Mill Hill School, London

- Results: GCE A-Level: Maths (A*), Further Maths (A*), Economics (A) ; GCSE: 6 A*s and 2 As
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Work Experience

10.2022- Present Assistant Manager in Forensic Technology KPMG, London

Developed a full-stack Semantic Search extension for an enterprise e-discovery platform

- End-to-end ownership of functionality delivery, from initial design and development through deployment and client adoption.
- Built a full-stack solution integrating an interactive JavaScript UI (ES6 modules, Rollup, Babel) with a Flask REST API for semantic retrieval using embedding models and vector similarity search. Enhanced usability with session storage management, redirect flows, filtering, and data visualisation with highlight and navigation, directly improving client efficiency in reviewing large document sets.
- Implemented secure authentication and authorisation (role-based access control, OpenID Connect, CSRF protection) and automated deployment with Azure CI/CD pipelines.
- Developed shared modules and reusable components, published and managed via Azure Artifacts, improving consistency and reducing development effort across different applications. Produced technical documentation and workflow diagrams to communicate system design to stakeholders and support maintainability.

Automated workflows with Python scripting for an enterprise e-discovery platform

- Eliminated manual file uploads by automating ingestion of text, audio, and images, while optimising workflows to run concurrently with SQL operations and capturing detailed loading metrics in a database.
- Built Python-based deduplication scripts to identify and remove duplicate documents across multiple workspaces and within single workspaces, reducing data processing volume and improving review efficiency.
- Advised clients on workflow automation opportunities to reduce repetitive tasks and enable focus on higher-value activities. Enhanced reliability through robust error handling, logging, and automated email notifications.

10.2020-12.2020 Research Intern at Cambridge University

- Implemented reinforcement learning algorithm e.g. weighted majority to compute hypothetical daily prices for S&P500 since 1950.
 - Compared merits of different algorithms and parameters (size of moving windows and learning rates), and analysed the results using Python. My strategy has led to better trading decisions, generating a CAGR of 10+%, 5 times higher than a buy and hold strategy.
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Programming Project

10.2022- 02.2023 Software Engineering Bootcamp at Northcoders (UK Hybrid)

Collaborated in a team of 5 to design, build, test, and deploy a full-stack mobile application for buying and selling goods.

- Front-end: Developed mobile UI in React Native with Firebase Auth for user authentication, Firestore for data storage, Gifted Chat React Native library for real-time messaging, and Postcodes.io for geolocation-based shop filtering. Back-end: Built RESTful APIs with Node.js and ExpressJS, integrated MongoDB for data management, and deployed via Render for continuous delivery.
 - Applied Test Driven Development (TDD) principles, writing unit tests to improve code reliability, error handling, and maintainability.
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Languages, IT and Interests

- Fluent in **English**, Native in **Mandarin**
- Cloud certifications: passed **AWS Cloud Practitioner** and **Microsoft Azure AI-900**, programming: **Javascript, React, CSS, Python, c# .Net Core**, database: **MongoDB, Postgres**, software development tools: **Github, VS Code, Jira, Docker**, Coursera certifications: Data structures, Supervised Machine Learning, Advanced Learning Algorithms; Finance: passed **CFA Level 1**