

Jay Shah

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EDUCATION

King's College London

BSc Computer Science (expected grade: 1st Class Honours)

Expected Graduation May 2026

Roundwood Park School

2016-2023

- A-Levels: Maths (A*), Further Maths (A*), Computer Science (A), Physics (A)
- GCSEs: 999999999

ACHIEVEMENTS

Mathematical Olympiads

- Placed in the top 200 nationally in the UKMT Junior Mathematics Olympiad (JMO) 2018, earning both a distinction and medal.
- Ranked in the top 100 nationally in the UKMT Intermediate Mathematics Olympiad (Cayley) 2019, receiving a distinction and medal.

EXPERIENCE

Ashbury Global London / Remote

Data Administrator

London / Remote

July – September 2024

- Cleansed and validated client data for major retailers such as Aldi, Tesco, Waitrose, and Greggs, ensuring accuracy and readiness for migration to the company's new system
- Automated the data validation process using Python, enforcing accuracy and improving efficiency by up to 12 times compared to the manual approach previously used by the team

Valtech

Software Developer Intern

London

June – July 2024

- Collaborated in a team responsible for developing and integrating front-end components for Ocado Technologies
- Independently designed and implemented new features using React
- Critiqued and reviewed code solutions proposed by team members before deployment
- Designed tests using the Jest framework with TypeScript to guarantee code correctness and reliability

Armalytix London

Software Developer Work Experience

London / Remote

May 2022

- Conducted research and development into the use of machine learning algorithms with TensorFlow to categorise transactions in the company's database
- Automated API testing using the Postman REST client, enabling scalable and repeatable test suites for continuous integration
- Developed and automated end-to-end tests using the Playwright framework in Python, reducing manual testing time

Tutoring roles
Computer Science, Maths and English Tutor

Hertfordshire / Remote
May 2024 – Present

- Delivered lessons to students ranging from KS1 to A-Level, both in-person and online, for Kumon, managing groups of up to 25 students.
- Provided personalized one-to-one tutoring to 9 GCSE and A-Level students, creating lesson plans and interactive materials to address individual student needs, enhancing engagement

PERSONAL PROJECTS

King's Capital (King's Business Club)
Senior Quantitative Trading Associate

October 2024 - Present

1. Quantitative Equity Portfolio Management Project – Deutsche Bank Collaboration

- Our team was invited by the Global Head of Quantitative Investment Solutions Research at Deutsche Bank to implement strategies from Chincarini & Kim's "Quantitative Equity Portfolio Management"
- Fully developed and back-tested two systematic portfolio models:
 - Market-neutral strategy eliminating market risk while maximizing alpha
 - Beta-neutral strategy with strategic factor tilts to enhance returns
- Presented findings to Managing Directors and VPs in Deutsche Bank's Quant team, currently implementing refinements based on their feedback

2. Financial Sentiment Analysis Research & Platform

- Co-authored a research paper exploring FinBERT applications for sentiment analysis in financial markets
- Independently developed and deployed a web-based sentiment analysis tool that is now actively used by members of the society
- The platform now serves as a decision support system for the society's investment decisions and market research (e.g. the results are a key factor in the Equities team's stock pitches)

Additional Contributions:

- Implemented various trading strategies using Python and C++
- Provided technical expertise to junior members e.g. teaching Python and basic portfolio theory to members of the society's academy

Recipe Tracker / Meal Planner Project

- Developed full-stack meal planning application with CRUD functionality using React and Node.js as I wanted a way to effectively track my meals
- Implemented a meal planning feature enabling users to create meal plans for up to 30 days, complete with an automated email system that generates shopping lists from the selected recipes
- Designed and implemented a custom API using Flask which used a machine learning-based clustering recommendation system to personalise meal suggestions by utilizing unsupervised learning techniques to dynamically group similar recipes based on user preferences, dietary restrictions, and past interactions.

TECHNICAL SKILLS

Programming Languages: Python, JavaScript, C++, Java, Scala, HTML/CSS, SQL

Frameworks and Libraries: React, Node.js, Django, Flask, NumPy, Pandas, TensorFlow