Matthew Zhang

+44 (0)7539765197 | mattz1106@gmail.com | LinkedIn: mattz1106 | London, UK

Education

The University of Edinburgh | Edinburgh, UK   *Expected May 2026*
Bachelor of Engineering (Honours) in Computer Science
Current grade: First Class
Relevant Coursework: Intro to Computation (Haskell), OOP (Java), Cognitive Science, Linear Algebra, Calculus

Experience

NASA | New York, US   *June – August 2020*
Software Engineering Intern
- Visualised Earthquake Signal Precursor data via 3D vectors using Python libraries, including NumPy and Matplotlib.
- Utilised the NASA WorldWind API to visualise vectors on an interactive globe model, providing an intuitive interface for researchers.
- Implemented lazy loading, improving model load time by 20% for faster data analysis and enhancing the efficiency of the research team's workflow.

Tutor | London, UK   *September 2022 – Present*
- Tutored GCSE and A-Level students in Mathematics and Computer Science.
- Assisted over 50 students in improving their understanding of key concepts and problem-solving abilities.
- Developed custom lesson plans tailored to each student's unique needs and learning styles.
- Received positive feedback from students and parents on students' academic improvements.

Projects

Hackathon Optiver Trading Bot (Python, Optiver API)
- Collaborated with a team of three to build a Python-based trading bot for Optiver's simulated trading platform.
- Devised a mean reversion trading strategy considering variables like bid-ask spread, order volume, and market volatility.
- Leveraged Pandas and NumPy for data analysis and real-time trade calculations.

AI Chatbot for Customer Service (Python, Natural Language Processing)
- Developed a responsive AI chatbot using Python and NLP that understands and efficiently answers customer queries, enhancing customer service efficiency.

Real-time weather app (ReactJS, NodeJS, OpenWeatherMap API)
- Designed the user interface for the web app using ReactJS and integrated the app with the OpenWeatherMap API to retrieve weather data in JSON format.
- Leveraged NodeJS for backend server construction to manage API requests/responses and implemented algorithms for efficient data processing.

Cryptocurrency Portfolio Manager (Python, SQL)
- Created a dynamic cryptocurrency portfolio management tool using Python that enabled tracking of digital investments in real time.
- Employed SQL for robust and secure data management, facilitating the tracking of transaction histories and evaluating investment performance effectively.
- Integrated live APIs to reflect real-time changes in cryptocurrency values, offering up-to-the-minute insights into portfolio standings.

Technical Skills

Languages: Python, Java, JavaScript, NodeJS, ReactJS, SQL
Developer Tools: Visual Studio, NetBeans, Eclipse, IntelliJ, Jupyter, WebStorm, MySQL