

Robert Karapetian – Curriculum Vitae

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Aspiring Software Engineer in 3rd year of Computer Science at Queen Mary University of London. Passionate about Artificial Intelligence and FinTech applications in industry. Avid photographer/videographer with a passion for music.

EDUCATION

Queen Mary University of London

September 2022 – June 2025

BSc Computer Science (Hons):

- **Final Year on track for 1st Class (84% achieved across 1st and 2nd year):** Relevant Modules: Algorithms and Data Structures, Object-Oriented Programming, Operating Systems, Probability and Matrices, Graphical User Interfaces, Software Engineering, Procedural Programming, Fundamentals of Web Technology, Automata and Formal Languages, Logic and Discrete Structures.

WORK EXPERIENCE

Aquis Exchange / Markets

London

Internship – Finance

September 2024

- Tailored and delivered a pitch to an exchange prospect, comprised of the CEO of Aquis and senior employees, proposing Aquis' cloud-based matching engine and 24/7 market surveillance as a cost-effective and ESG-focused solution.
- Assisted senior professionals across all business divisions, gaining exposure to multi asset trading, stock listing processes, order types, trading mechanisms, market structure, and related technologies through trading desk activities and market simulations.

NatWest Group

London

Internship – Software Engineering

June 2024 – August 2024

- Designed a comprehensive Terraform pipeline and pushed changes to improve the Grafana dashboard to the company goal of 95% availability, creating detailed documentation for both tasks.
- Joined the Code Club team, using Agile methodology to guide backend development of a full-stack website designed to streamline signup/progress tracking. Coordinated testing using Jest and presented to the COO of Digital Transformation and 50 Code Club employees.
- Led a team of 5 in preparing a business project related to climate change, applying Agile practices and data-driven research to prototype a green rewards scheme for the NatWest mobile app, integrating environmental initiatives to align with stakeholder priorities.

IBM

London

Internship - Student Consultancy Project (QMUL)

May 2023

- Led a team of 4 in conducting a strategic analysis of the IBM Skills Build platform, advising on educational relevance for 2 million users in the next 5 years, with a focus on Artificial Intelligence, Data Science, and Security.
- Developed and presented a data-driven visualisation to the Master Inventor at IBM, mapping over 100 Skills Build resources across 10 academic disciplines, categorising them by potential demand and relevance.

Inferential Futures

London

Internship – Software Development and Artificial Intelligence

March 2023 - April 2023

- Designed and implemented a prototype of a GPT-enabled careers-advice chatbot, using OpenAI APIs to process prompts and return responses.
- Wrote and discussed a paper on the potential of such implementations and broader Artificial Intelligence concepts in the careers advice space, exploring capability, performance, and cost for the present-day OpenAI APIs.
- Conducted user testing with 30 participants, achieving a 96% satisfaction rate for the original prototype's functionality and user experience.

Queen Mary University of London

London

Laboratory Demonstrator – Computer Science

September 2023 - Current

- Facilitated the administration of modules for over 600 students by explaining concepts, marking coursework, and invigilating exams.
- Provided one-on-one Java/Python coding sessions during lab hours to explain complex topics like recursion, inheritance, and multithreading.
- Modules: Object-Oriented Programming, Fundamentals of Web Technology, Database Systems, Logic and Discrete Structures, Professional and Research Practice, Procedural Programming, Computer Systems and Networks.

MCS Projects

London, Kent, and Birmingham

Activity Leader - STEM Challenge Days

June 2023 - July 2023

- Directed STEM activity events and finals for over 400 secondary school students across England with a 100% satisfaction rate.
- Co-ordinated the E-Fit, Electric Vehicle, and Robotics Challenges, centred around computerised visualisations, climate, and automation.

PROJECTS & SKILLS

NatWest Code Club Progress Tracker - MongoDB | Express.js | React | Node.js

- Developed a full-stack website in a team of 20 using Agile processes to improve signup and progress tracking for over 45,000 students.
- Coordinated tests by leveraging Jest, including database/method mocking alongside unit/integration tests to ensure reliable user experience.

FDM Employee Portal Application Coursework - React | Next.js | Prisma ORM

- Directed a team of 7 to develop a full-stack website for FDM employees using the Agile methodology, accommodating HR processes.
- Spearheaded the development strategy using the Agile methodology, via daily stand-up meetings to ensure timely delivery of the app.
- Presented to FDM stakeholders and achieved 1st place in the Software Engineering Project Competition out of 8 groups.

Weather Application for Construction Site Managers - React | Next.js | Tailwind CSS | OpenWeatherMap API

- Managed a team of 4 to develop a responsive weather application using OpenWeatherMap API to fetch and display data based on location.
- Prototyped designs using Figma and made documentation and a 10-minute video regarding requirements, design, and evaluation.

GPT-enabled Careers Advisory Chatbot - PHP | JS | SQL | OpenAI API

- Developed a full-stack web application prototype making use of Ada, Babbage, Curie, and Davinci APIs for prompt processing.
- Researched AI APIs in the career advisory space and wrote a paper discussing capability and expenses.

Languages and Technologies: Java | Python | HTML | CSS | PHP | JavaScript | React | Next.js | TypeScript | Azure | SQL | Oracle | Jest | Git | Java Swing | Tkinter | Pygame | XML | MIPS | Jira | Confluence | Linux | Visual Paradigm | Wireshark