

FRAN MOWAT

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Highly dedicated, self-starting computer science student with a passion for software development, machine learning, and cyber security. Strong problem-solving and analytical skills, combined with an inquisitive nature and the ability to articulate complex and technical ideas effectively. Proficient in various programming languages. Broad experiences across international hackathons and technology internships, coupled with a portfolio of diverse projects. Seeking opportunities to apply technical knowledge, solve practical challenges, and deliver products to end-users.

KEY SKILLS

Proficient in numerous programming languages, including Python, Java, Kotlin, and SQL | Skilled in front-end development using HTML, CSS, Bootstrap, JavaScript, and React | Experienced with web frameworks such as Django and Flask | Applied knowledge of integrating with RESTful APIs and developing APIs using JAX-RS | Proficient in version control via Git and GitHub | Strong foundation in data structures, database design, and mathematics | Familiar with various IDEs, including Visual Studio, NetBeans, and Android Studio | Effective and adaptable problem-solving abilities

EDUCATION

University of Westminster - BSc Computer Science Honours

(September 2023 - Current)

Grade: 1st (predicted), 98% module average

Roles and societies: Computer Science and Engineering school representative, Computer Science course representative, AWS DeepRacer team, Google Developer Student Club, FANS orientation event coordinator

Putney High Senior School

(September 2016 - July 2023)

A-Levels: Computer Science, Mathematics, Physics

GCSEs: 10 A*s - Mathematics, English Language, English Literature, Biology, Chemistry, Physics, Computer Science, Physical Education, Geography, Spanish

Roles and societies: lead software engineer in robotics club, delegate at GDST AI Techathon, senior rowing and netball teams

Awards: awarded Academic Scholarship for 6th Form, computer science graduation prize, and silver and gold Athena awards

WORK EXPERIENCE

Morgan Stanley Technology Industrial Placement

(June 2025 - Current)

Believ Technology Intern

(May 2024 - September 2024, May 2025 - June 2025)

Worked in a startup EV charging company to deliver technology projects, streamline business processes, and drive productivity including:

- Calculated competitor utilisation and downtime across 17,000+ UK locations by automating API data collection with AWS Lambda and storing the data in a PostgreSQL database on AWS RDS for analysis
- Developed a Site Assessment Tool to assess the suitability of various UK sites for installing EV charging infrastructure
- Built a Flask web application to redirect over 1000 QR codes to the correct URLs by pulling in real-time API data
- Manipulated datasets using QGIS software to assess their suitability
- Designed multiple PowerBI dashboards to facilitate data visualisation
- Led development of a number plate lookup webpage to inform customers of vehicle capabilities
- Automated a manual cabling infrastructure mapping process using Python, transforming a 30-hour task into a 2-minute procedure

Software Academy Programming Tutor

(September 2024 - April 2025)

Taught programming skills, including Python, JavaScript, CSS, HTML, and Scratch, to over 45 students weekly aged 6 to 13.

HSBC Global Banking and Markets Spring Insight Programme

(April 2024)

Selected from over 5000 applicants for a comprehensive week-long insight into HSBC's Global Banking and Markets division. Attended various specialised workshops on topics such as investment banking and security services, conducted a debt capital markets case study and outperformed 90% of the teams, engaged in a trading simulation to enhance understanding of raising capital, and networked with HSBC employees across a variety of sectors and asset classes.

Costa Coffee Barista

(July 2023 - September 2023)

Worked in a high-volume coffee shop as part of a team of baristas to efficiently prepare customer orders, maintain a clean environment, and ensure a pleasant customer experience.

Marks and Spencer Work Experience

(July 2019)

Worked in the Data Insights and Analytics team to improve the accessibility of Clothing and Home product data.

Netball Umpire | Rocks Lane Sports Centre

(September 2015 - July 2018)

Umpired netball matches in a fast-paced environment to ensure both the safety and the entertainment of children.

CERTIFICATIONS AND ACHIEVEMENTS

AWS Artificial Intelligence & Machine Learning Scholarship

(June 2024 - September 2024)

Awarded sponsored enrollment in the Udacity AI Programming with Python Nanodegree. Over a 4-month period: trained a deep-learning model to classify flower images into 102 distinct species; gained familiarity with essential neural network Python libraries, including PyTorch, NumPy, Pandas, and Matplotlib; utilised a pre-trained image classifier to categorise various dog breeds; studied linear algebra and calculus, including their applications in neural networks; developed a Python package for Gaussian and Binomial distributions.

CompTIA A+ Certification

(May 2024)

Successfully completed the CompTIA A+ Certification, demonstrating proficiency in computer hardware, software, operating systems, networking and cybersecurity. Awarded funding to cover examination costs through the Ignite Fund.

Problem Solving International Hackathon 2024

(February 2024)

Competed against teams internationally to solve logic, mathematical, and programming challenges. Placed 7th out of over 100 participating teams and achieved the top score amongst all UK contenders.

Duke of Edinburgh Gold Award

(November 2021 - May 2023)

Successfully accomplished Gold Duke of Edinburgh award. Activities included: volunteered at a local library, completed a British Sign Language course, completed two 5-day expeditions hiking through the Brecon Beacons.

UKMT Senior Maths Challenge Gold Award

(December 2021)

Participated in the UKMT Senior Maths Challenge and attained a score in the top 11%, resulting in a Gold Award and an invitation to the subsequent round.

UK Bebras Challenge Gold Award

(December 2020)

Competed in the UK Bebras Challenge, a computational thinking exam. Achieved a score in the top 10% of the country in the senior age category, leading to an invitation to the Oxford University Computing Challenge. Obtained a distinction in previous UK Bebras Challenges in 2018 and 2019.

PROGRAMMING PROJECTS

(2023 - Current)

Personal projects developed to enhance technical skills and apply theoretical knowledge in practical situations. Where applicable, headings are hyperlinked. A more comprehensive list of projects can be found at github.com/fran-mowat.

- **Minesweeper** | HTML, CSS, JavaScript | A minesweeper game with a leaderboard that tracks scores across different game levels.
- **Music Suggestion Tool** | Python (Flask, Jinja2), HTML, CSS, JavaScript | A website providing tools to aid music discovery. One leverages the Spotify API to generate a list of recommended tracks based on an inputted playlist.
- **Bookstore API** | Java (JAX-RS) | A RESTful API for a bookstore application, simulating a real-world e-commerce backend for managing books, authors, customers, shopping carts, and orders.
- **Quiz App** | HTML, SCSS, TypeScript (Angular) | An interactive Angular application leveraging component-based architecture and Angular services to integrate a trivia API and dynamically generate quizzes across multiple categories and difficulty levels.
- **Tic-Tac-Toe** | HTML, CSS, JavaScript | A classic tic-tac-toe game, including one-player and two-player versions.
- **Estate Agents** | HTML, CSS, JavaScript (React) | An estate agent website to display numerous property listings, allowing users to filter by various categories, view interactive maps of the properties, and collate a list of their favourites.
- **Movie Database** | Kotlin, Jetpack Compose | An Android mobile application designed to assist users in exploring and storing movie details by retrieving movie data via the OMDb API, storing movie data in local database storage, and searching for movies and actors.
- **Colour Picker Tool** | HTML, CSS, JavaScript | A tool that enables users to find hexadecimal and RGB values of different colours.
- **Etch-a-Sketch** | HTML, CSS, JavaScript | A whiteboard-based tool which emulates the 1960s drawing device; the etch-a-sketch.
- **Spinner** | HTML, CSS, JavaScript | An interactive spinning wheel, allowing users to input values and randomly select one.

COURSES AND TECHNICAL TRAINING

(2022 - Current)

Completed training and courses to further develop knowledge and understanding of technical topics.

- **Generative AI with AWS Udacity Course** | Month-long programme encompassing a wide range of concepts such as transformer-based architectures and societal impacts of generative AI. Concluded with a Python project to fine-tune a foundation LLM using Amazon SageMaker.
- **CyberFirst Advanced** | Five-day residential SCQF Level 6 accredited course run by NCSC covering a broad range of cybersecurity topics, including encryption, networks, and digital forensics within lectures, practical labs, and a *Capture The Flag* challenge.
- **The Odin Project** | Comprehensive course encompassing front-end technologies like HTML, CSS and JavaScript and version control using Git. Involved the development of many projects such as a responsive sign-up form, a calculator, and a sales dashboard (linked).
- **InvestIN Computer Scientist Experience** | Five-day software engineering programme incorporating activities such as programming a robot with line-detection abilities and a Python data science project to analyse climate data.
- **Quantum Geographic Information Systems Course** | Developed mapping and spatial analysis techniques using QGIS software to transform CSV data into insightful visualisations.
- **IBM Introduction to Cloud Computing Course** | Learned about different cloud service models, deployment methods, infrastructure, and CDNs.
- **Codecademy JavaScript and Interactive JavaScript Websites Courses** | Developed JavaScript skills such as leveraging DOM events to add interactivity and templating using the Handlebars library.