

# FRAN MOWAT

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GitHub: [github.com/fran-mowat](https://github.com/fran-mowat) | LinkedIn: [linkedin.com/in/fran-mowat/](https://linkedin.com/in/fran-mowat/)

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 and front-end development. 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

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Proficient in numerous programming languages, including Python, Java, and SQL | Front-end development skills, including HTML, CSS, JavaScript and responsive design | Experienced in version control via Git and GitHub | Strong foundation in data structures, discrete mathematics, and statistics | Familiar with various IDEs and software, including Visual Studio, Thonny, and NetBeans | Experienced integrating with RESTful APIs | Adaptable problem-solving abilities

## EDUCATION

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### University of Westminster - BSc Computer Science Honours

(September 2023 - Current)

**Grade:** 1st (predicted), 99% first year average

**Roles and societies:** 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 team, senior netball team  
Awarded Academic Scholarship for 6<sup>th</sup> Form, computer science graduation prize, and silver and gold Athena awards

## WORK EXPERIENCE

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### Software Academy Programming Tutor

(September 2024 - Current)

Teaching programming skills, including Python, JavaScript, and Scratch, to over 45 students aged 6 to 13.

### Believ Technology Internship

(May 2024 - September 2024)

Worked in a startup EV charging company to deliver technology projects, streamline business processes, and drive productivity including: 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 1000+ QR codes to the correct URLs by pulling in data from an API; 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.

### 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.

## TECHNICAL DEVELOPMENT AND TRAINING

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(May 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 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.
- **CyberFirst Defenders** | Five-day SCQF Level 4 accredited course incorporating cybersecurity practices and principles, including cryptography, networks, IP addressing, and digital forensics.
- **InvestIN Computer Scientist Weekend** | Consisted of AI, cybersecurity, and full-stack development activities, such as a practical penetration testing exercise and development of a fictitious pizza company website.
- **Codecademy JavaScript and Interactive JavaScript Websites Courses** | Developed JavaScript skills such as leveraging DOM events to add interactivity and templating using the Handlebars library.
- **Codecademy Java and Python 3 Courses** | Enhanced knowledge of core programming concepts in Java and Python, including object-oriented programming and data structures.
- **Google Digital Marketing Course** | 40-hour Interactive Advertising Bureau-accredited course focused on search engine optimisation, data analytics, advertising streams, and building web presence.
- **Web Analytics Accenture Course** | Explored web analytics fundamentals and utilisation of data to drive business performance.

## CERTIFICATIONS AND ACHIEVEMENTS

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### 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 problem solving challenges. Placed 7<sup>th</sup> 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

(May 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](https://github.com/fran-mowat).

- **Music Suggestion Tool** | Python (Flask, Jinja2), HTML, CSS, JavaScript | Development of a website providing tools to aid music discovery. One generates a list of recommended tracks based on an inputted playlist by interacting with the Spotify API.
- **Personal Website** | HTML, CSS, JavaScript | Built a responsive website to display personal experiences and ongoing projects.
- **Typing Speed Test** | HTML, CSS, JavaScript | Created a tool to allow users to assess typing speed and accuracy.
- **Tic-Tac-Toe Game** | HTML, CSS, JavaScript | Developed the classic tic-tac-toe game, including functionality for one-player and two-player versions.
- **Colour Picker Tool** | HTML, CSS, JavaScript | Created a tool to allow users to find the hexadecimal and RGB values of different colours selected on a colour spectrum.
- **Calculator** | HTML, CSS, JavaScript | Designed a graphical calculator to perform basic mathematical operations.
- **Etch-a-Sketch** | HTML, CSS, JavaScript | Built a whiteboard-based tool which emulates the 1960s drawing device; the etch-a-sketch.

Reference available upon request