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 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

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

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 representative

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 6th Form, computer science graduation prize, and silver and gold Athena awards

WORK EXPERIENCE

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 *(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

AWS Artificial Intelligence & Machine Learning Scholarship   *(June 2024 - Current)*
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 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   *(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.

- **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