Adam Aly

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EDUCATION

The University of Manchester — Expected 2026

B.Sc (Hons) Computer Science

- Relevant Modules: Intro to Programming 1 and 2, Mathematical Techniques for Computer Science, Data Science, Computer Engineering, Computer Architecture, Operating Systems, Fundamentals of Computation
- **2nd Place** in UniCS Autotrader Hackathon

Calday Grange Grammar School for Boys — 2019 - 2021

GCE A Levels in Computer Science (A*), Chemistry (A*), Biology (A*)

EXPERIENCE

R3 | *Software Engineer Intern (London)* — 2024

- Worked in the Corda 4 Development team, focusing on increasing transaction volume per unit time between nodes on Corda 4 networks.

Goldman Sachs | *Spring Insight Program* — 2024

- 1 of 150 from a pool of 7000 applicants selected to participate in the 'Get Set for GS' Spring Insight Program at the Goldman Sachs London headquarters.
- Gained insight into the day-to-day operations of the firm and the vital role of Engineers in the financial industry. Participated in networking events and HackeRank challenges.

gpdirectonline.co.uk | *Software Engineer* — 2023-24

- Assisting in the development of the website for GP Direct Online, an online pharmacy startup.
- Working beneath Senior Developers to implement new features and fix bugs, primarily using HTML, CSS with some PHP, Javascript and MySQL.

Tutorful | *Mathematics, Chemistry and Java Tutor* — 2024

- Providing guidance, support and mentorship to students in their academic studies and career aspirations.

PROJECTS

ShopSmart | Python, JavaScript, PHP, mySQL, HTML, CSS — 2023-24

- Worked in a team of 4 to develop a web application that allows users to compare prices of products across popular grocery retailers in the UK like Aldi, Tesco and Sainsbury's.
- Utilised Python's Beautiful Soup and Selenium Libraries to scrape data from the retailers' websites and store it in a mySQL database.
- Implemented a user-friendly front-end using HTML, CSS and JavaScript with PHP to display the data and allow users to search for products.
- Gained experience in working with APIs, web scraping, databases and front-end development.

Kim Joy's Magic Bakery | Java, JavaFX — 2024

- Created a GUI application for the **Kim Joy's Magic Bakery**, card game based on the Great British Bake Off.

MU0 Processor | Verilog — 2023

- Designed and implemented a 16 Bit MU0 Processor using Hardware Description Language (Verilog).
- Implemented a 16-bit ALU, 2 16-bit Multiplexers, 2 16-bit Registers (PC and IR) and a 12-bit Address Bus.
- Executed programs using the MU0 Processor and executed via FPGA.

Endless Terrain Generator | C#, Unity 3D — 2019

- Developed a procedural landmass generator in C# using Unity 3D that creates endless terrain using Perlin Noise.
- Implemented a customisation options which allowed users to adjust the terrain's height, scale and resolution.
- Utilised Unity's built-in terrain assets and a select few external resources to create realistic textures and foliage.

SKILLS & OTHER PROJECTS

- Java (3-4 years), Python (2 years), C# (2 years) C (1 year), HTML/CSS/JS/PHP (1 year), ARM Assembly, Verilog, mySQL, Unity 3D, Git, LaTeX, Operating Systems (Processes, Memory Management), RegEx, Linux, CLI, Matplotlib, Jupyter Notebook
- Competitive Programming
- Swimming at a competitive level for 10 years, teaching swimming for 3 years
- Completed 3 Peaks Challenge (Ben Nevis, Scafell Pike, Snowdon) in 24 hours