

Ahmad Adebowale

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EDUCATION

University of Cambridge Cambridge
Bachelor of Arts in Computer Science Oct. 2025 – Present

University of Liverpool Mathematics School Liverpool
A Computer Science, A* Further Mathematics, A* Mathematics, A* Physics* Sep. 2023 – June 2025

EXPERIENCE

Umbizo Manchester / Remote
Software Engineer and Data Scientist Dec. 2024 – Present

- Analysed **3.4M** patient trauma records using logistic regression and GLMs, achieving **0.909 AUC** in a study on racial disparities in healthcare outcomes
- Built missing data imputation pipeline using **R**'s **MICE** package across **5** datasets, and combined results via Rubin's rules for robust analysis
- Provisioned a Hetzner **Linux VM**, quantized data and **allocated swap** to meet memory needs of the imputation

PAIR (Formerly Inversity) London
Software Engineer Intern Sep. 2024

- Developed and deployed a real-time **CTF**-style platform for teams to restore broken VMs after incidents
- Created custom **Dockerfiles** to build specialised images for each CTF challenge
- Secured competition environments by creating isolated challenge and judge **Docker** containers

Daresbury Labs (Scientific Computing Department) Daresbury
Work Experience Aug. 2024

- Developed a Python simulation to model movements of complex molecules based on pairwise atomic interactions
- Reduced frame time **90%** by making vector calculations parallelizable on a **GPU node**
- Prepared and scheduled jobs with **SLURM** for the **SCARF HPC Cluster**

PROJECTS

TMUA Academy | [TMUA.academy](https://tmua.academy) | *Next.js, Hono, CF Workers + D1 + R2, Python* July 2025 – Present
Solo Founder

- Developed full-stack platform to help students prepare for the TMUA (Cambridge/Imperial entrance exam) with an exam simulator and **400+** mock questions
- Generated **£23,000** in revenue while partnering with schools and tutors to deliver the platform to students
- Gained **1.6k users** in **3 months**, capturing **22% of all candidates** sitting the exam
- Created a **Python** pipeline using LLMs to parse past-paper PDFs into hierarchical questions, including image-to-description matching

Super Simple MD | *Python, NumPy, CuPy, ASE* Aug. 2024

- Built Lennard-Jones + spring **molecular dynamics** engine with **velocity-Verlet** for accuracy
- Simulated crystals** using **periodic boundary conditions**, wrapping atoms and interactions from one side of the cell to the opposite to approximate bulk material
- Extended the program with gravitational forces to model the solar system

ACHIEVEMENTS

Financial Times Hackathon: 1st place (out of 400), earning **£1,000**, an office tour, and a meeting with the CTPO
Inversity Hackathons: Won **5** consecutive national hackathons, awarded **£6,000** and an internship with the founders
Reply Challenge: Top **0.5%** in **4-hour global team challenge** writing code to solve logical tasks
ICMS AI x Mathematics 2026: Delivered an **invited talk** on “LLMs for problem-based practice in Mathematics”

TECHNICAL SKILLS

Languages: Python, Java, JavaScript, R, SQL, HTML, CSS

Frameworks & Libraries: Next.js, Hono, NumPy, CuPy, Scikit-learn, ASE

Developer Tools & Platforms: Linux, Docker, Cloudflare (Workers, D1, R2), Git