

Samuel Graham

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Education

University of Bath – MEng (hons) Mechanical Engineering (2020-25 with Sandwich Placement)

Predicted a First (77%), including: Heat Transfer – 96%, Control Systems – 94%, Mathematics 2 – 84%

Lutterworth College (2018-20) – A-level Results, A* A* A* A* in: Computer Science, Maths, Further Maths, Physics

Other Educational Achievements: Harvard CS50 Computer Science (2023)

Experience

3P Innovation – Software Engineer (2024) – Adapted quickly to 3P's coding structure, delivering working products within 3 weeks transforming raw data into actionable insights for £2 million machines. Integrated mid-project, I built a GUI for a FTSE 100 client's machine, demonstrating teamwork, resilience, and adaptability, resulting in a graduate offer.

English Teacher in Madrid (2024) – Lived with a host family in Madrid for 7 weeks, where I also led English classes for students of varying ages and abilities, demonstrating confidence, organisational skills and adaptability to new situations.

CE Tuition – A-Level Maths Tutor (2023-Present) – Tutor A-Level maths for 4 hours per week at university, bringing one student from a C to A* grade within 4 months, strong communication skills in outlining complex ideas to others.

3P Innovation – Mechanical Engineer (2022-23) – Worked with and for internal and external stakeholders, gaining experience in ideation, design, assembly, testing, and supplier management. Key responsibilities included presenting complex designs to customers and leading the procurement of a £1 million machine, showing interpersonal skills.

Related Technical Projects

- **Machine Learning for Portfolio Optimization (2025)** – Partnering with external financial firm to optimize asset allocation in investment portfolios using quantitative analysis and machine learning. Project focuses on balancing emissions reduction with transaction costs and risk profiles, showing Python programming and data analysis skills.
- **Anki Deck Creator (2024)** – Developed a Python program that processes Spanish PDFs, lemmatizes verbs, calculates word frequency, stores data in an SQL database, and generates an Anki deck with unique words ordered by frequency. This project allowed me to use new APIs, SQL and demonstrated my curiosity and continuous learning mentality.
- **Web Development (2024)** – Developed a personal website using, HTML, CSS and JavaScript with React during evenings alongside my software engineering internship, showcasing front-end skills, responsive design, and commitment to continuous learning. Created a clean, user-friendly interface for a polished portfolio website.
- **Spacecraft Heat Transfer Simulation (2022)** – Collaborated in a team to simulate heat conduction through spacecraft heat shield tiles, using methods like forward/backward differencing, Crank-Nicolson, and Dufort-Frankel. This project demonstrated my understanding modelling using complex mathematics. Received a first-class grade for its success.

Software Skills

Python (Intermediate) – Experience building personal and educational projects, and implementing APIs, in Python.

Github (Advanced) – Used GitHub for building and editing code and sharing projects with others within industry.

Web Development (Beginner) – Experience using HTML, CSS, JavaScript and React to develop my personal website.

SQL (Beginner) – Experience using SQL to read and write large datasets to and from databases in personal projects.

Extra-Curricular Achievements

Brazilian-Jiu Jitsu & Kickboxing – Earnt a blue belt in Brazilian Jiu-Jitsu and medalled in national competitions in both.

B2 Spanish – Self-taught conversational Spanish, displaying my ability and interest in learning. Now working to C1 level.

County Cricket – Before university, I played county cricket for Leicestershire, building teamwork and leadership skills.

Interests

University Football – In Bath Universities' inter-departmental football league, training, playing and attending socials.