

Matthew Bowler

mattbow55@googlemail.com | 07938 598803

linkedin.com/in/matthew-bowler-mb | github.com/BowlerM |

Portfolio: bowlerm.github.io/Portfolio/

Personal Profile

I am currently a 3rd Year Computer Science student at the University of Leeds studying for my bachelor's degree. I have gained experience in various aspects of software engineering through my university work and personal projects. I am excited to graduate and apply my knowledge and skills into a software engineering graduate role.

Education

University of Leeds, September 2022 – Present

Computer Science, BSc – Averaging a first class

Relevant Modules:	Results:
Intro to Web Technologies	77/100
Databases	66/100
Procedural Programming	96/100
Object Oriented Programming (Java)	99/100
Software Engineering Principles	76/100
Web Application Development	81/100

Xaverian College, Manchester, 2020 – 2022

A levels: Computer Science – A*, Maths – A, Further Maths – A

Audenshaw High School, Manchester, 2014 – 2020

GCSEs: Achieved 1 Grade 9, 5 Grade 8's including Maths and Computer Science, 1 Grade 7 and 2 Grade 6's

Technical Skills

Programming Languages: Python (proficient), HTML, CSS, Java (Basic), C/C++ (Basic)

Web Technologies: REST APIs, Flask, Fast API

Databases: SQL (MySQL, SQLite), NoSQL (MongoDB)

Version Control: Git, GitHub

Other Tools: Linux/Unix environments, Microsoft Office/Teams, Azure, Windows

Academic and Personal Projects

Backend Developer for Webscrapi (Collaborative)

- Co-developed a SaaS web scraping platform with a friend, focused on creating an easy-to-use generalised web scraper.
- Implemented the backend infrastructure and REST API using Python framework: FastAPI.
- Integrated MySQL database to manage and store user information, including account details and user generated content.
- Designed an authentication system using JWT for secure API access.
- Collaborated with front-end developer to ensure smooth integration.

Year 1, Programming Project (Academic)

A set of image conversion and compression algorithms between images of a custom file type written in C.

- Read in provided images as binary into a dynamically allocated 2D byte array using malloc.
- Created a compression algorithm by packing 5-bit pixel values (max value 31) into bytes, reducing file size by eliminating unnecessary byte space.
- Optimized compression further by implementing a 3x3 block-based average pixel compression, achieving an additional 90% file size reduction.
- Designed conversion algorithms to efficiently switch between compressed and uncompressed image formats.

Year 2, Group Software Engineering Project (Academic)

Within a group of 5, developed a web application, following agile principles, that allows users to view journeys they have taken on a map by uploading GPS data to the site.

- Utilized the Python framework Flask to implement the backend architecture, delivering dynamic frontend pages through Jinja templates.
- Used HTML and CSS to create a user-friendly login and register interface.
- Handled the login and register requests in the backend using an SQLite database.
- Integrated and handled Stripe payment processing in the frontend and backend.
- Worked collaboratively with my colleagues setting regular meetings and using kanban boards to monitor progress along with GitHub to collaboratively build the project and store documentation.
- Used Belbin team roles to identify possible conflicts and catch them early.

Leeds Hack 2025 (Collaborative)

Participated in a 24-hour hackathon at the University of Leeds, collaborating in a team of 4 and working closely with the fintech sponsor to develop a prototype onboarding process for a decentralized autonomous organization insurance service.

- Efficiently designed the project scope to ensure delivery of the product within the limited time available.
- Implemented backend architecture using Flask (Python) and an SQLite database.
- Designed and implemented an effective database structure to handle the complex nature of the application such as policy data, claims processing and DAO governance.
- Developed API endpoints to provide required functionality and was responsible for linking the frontend and backend together.

Other work

Bar staff, O2 Apollo, Manchester, July 2022 – September 2022

- Worked in a fast-paced environment, managing customer orders and handling customer payment.
- Developed strong teamwork and communication skills by collaborating with colleagues to manage busy shifts.

Interests and Hobbies

- Regularly attend social events, such as hackathons, held by CompSoc.
- Practicing music production and playing guitar.
- Enjoy reading to relax.
- Running and fitness training.