

Dwij Rameshbhai Shah

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PROFILE SUMMARY

Motivated and curious BSc Artificial Intelligence student at Nottingham Trent University with strong academic grounding in cognitive computing, cloud systems, and distributed databases. Experienced with Python, Java, C++, and SQL, and passionate about building accessible, user-centred digital tools. Demonstrated ability to collaborate in teams through hackathons and academic projects, with hands-on experience in timetable systems, RPG-based learning tools, and data-driven applications.

EDUCATION

Nottingham Trent University, Nottingham, UK
Bachelor of Computer Science Artificial Intelligence (Hons)
2023 – 2026

- Achieved a 1st in all modules during first year.
- On track for a 2:1 or higher.
- Modules: System's software, Information and Database Engineering, Software Design and Implementation, Data Analytics and Python Programming, Foundations of AI and ML, Practical Project Management.

WORK HISTORY/RELEVANT PROJECTS

Graphing App – Personal Project (C++, wxWidgets, cmake)

April 2025 – Present

- Developing a graphing tool in C++ to visualise mathematical functions and data.
- Implementing features like plotting equations, zooming, and customisation of axes using wxWidgets for the GUI.
- Focusing on optimising performance for handling large datasets and ensuring smooth user interactions.

Timetable Management System – University Project (C++, SQLite)

Oct 2024 – April 2025

- Built a system to register lecturers, assign modules, and generate weekly schedules while resolving conflicts.
- Used SQL queries to manage data and ensure atomic updates, reflecting real-world scheduling constraints.
- Designed a command-line interface with modular code for maintainability and clarity.
- Applied object-oriented principles to manage course, room, and session assignments.

Cloud Load Balancer – University Project (Java, Docker, SQLite, MySQL)

Dec 2024 – Feb 2025

- Developed a custom load balancer using Java and socket programming to distribute client file requests across multiple containerised storage nodes.
- Simulated real-world cloud infrastructure with a MySQL database, multiple file nodes, and dynamic container scaling under high traffic.
- Implemented intelligent request routing logic to balance load across containers based on traffic and availability, simulating cloud infrastructure behaviour.

Educational RPG Game – HackNotts Winner (Python, Pygame)

Oct 2024

- Co-developed an educational RPG to teach credit literacy, winning Capital One's challenge at HackNotts.

- Implemented game logic and UI using Python, focusing on code structure and user interaction.
- Collaborated via GitHub and Agile-style planning in a cross-functional team of 4 developers.

ADDITIONAL SKILLS & INTERESTS

Technical Skills:

- **Programming:** C++, C#, Java, Python, Bash, JavaScript
- **Systems & Admin Tools:** Docker, Linux (Fedora, Ubuntu), Windows Server (academic), Shell scripting
- **Software Development:** OOP, concurrent programming, microservices (concepts), debugging, peer code review
- **Databases:** SQL, MySQL, relational data modelling, optimisation (used in timetable system and personal projects)
- **Networking & Security (Basic):** Container networking, OS-level troubleshooting, exposure to RDP setup and firewall configuration
- **Version Control:** Git
- **Documentation:** Technical research and implementation guides (e.g. SEO project, internal team documentation)

Soft Skills:

- **Problem Solving:** Diagnosed and resolved real-world system issues (e.g. GPU/display manager conflicts, Docker container bugs)
- **Communication:** Delivered clear documentation and explanations to technical and non-technical peers
- **Teamwork:** Collaborated in university teams, group hackathons, and customer-facing part-time roles
- **Time Management:** Effectively balanced multiple priorities, including projects, university deadlines, and part-time work
- **Adaptability:** Quickly learned and applied unfamiliar tools and technologies (e.g. Fedora Linux, Docker, RDP configuration)