

Mahdi Hussain

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Skills: JavaScript, Java, React, Spring, Express, Python, HTML, CSS, SQL, Git, Bash, Object Oriented Programming, Agile

EDUCATION

BSc Computer Science - First Class Honours (1:1) | University of Leicester

July 2025

Notable Modules: Algorithms, Data Structures and Advanced Programming; Object Oriented Programming; Software Architecture and System Development; Databases and Domain Modelling; User Interface Design Evaluation, Internet and Cloud, Mobile and Web Development.

PROFESSIONAL PROFILE

First Class Computer Science graduate with strong experience delivering full-stack web applications. Skilled in JavaScript, Java, and modern frameworks, with a proven track record of building scalable, high-performance systems.

PROJECTS

Event Booking Platform

- Developed a full-featured event booking platform using **TypeScript and TSX**, enabling users to host, manage, and discover events seamlessly
- Reduced frontend rendering time to consistently **under 1 second** by applying **lazy loading** and **memoization** in a **React.js + Vite.js** stack, significantly improving user experience
- Optimised **RESTful API** handling with **Node.js** and **Express Routers**, improving code maintainability and data flow
- Enhanced database query performance by implementing **PostgreSQL** with strategic **indexing**, boosting access speed to frequently retrieved records
- Engineered a **scalable**, decoupled architecture with a frontend hosted on Netlify and backend services on Railway, delivering high performance and seamless user experience across both desktop and mobile devices

IBM SkillsBuild Companion

- Commissioned by **IBM** to develop a mock web application to incentivise students to engage with the **IBM SkillsBuild Platform** through gamification, successfully increasing user activity by **30%** in a mock trial
- Spearheaded the **Agile** development process as **Scrum Master** for a **team of 8**, managing weekly standups and sprint events for timely completion of project milestones
- Leveraged **Java** and **Spring MVC** to implement **RESTful** services, handling data management and business logic
- Configured a **relational database** with **MYSQL** for data storage and role-based access, enabling detailed user management
- Leveraged **GitLab** for documentation and **version control**, fostering collaboration and maintaining code integrity

London Landmark Finder

- Developed a web application in **HTML, CSS, and JavaScript** that assists users in discovering landmarks across London
- Implemented **AJAX** for dynamic content updates, guaranteeing accurate database access without page reloads
- Secured user sessions with **JSON Web Tokens (JWT)**, enhancing authentication reliability and session management

Private Cloud Whiteboard

- Distributed a shared, interactive whiteboard application across multiple **Azure App Service** nodes
- Achieved persistent, low-latency connections by integrating Azure Web PubSub for **WebSocket** communication and **Redis Cache** for state synchronisation and rapid data retrieval
- Applied **Docker containers** to simplify horizontal scaling, allowing quick instance deployment during peak demand

Bookstore API

- Designed a **REST API** specification for a virtual bookstore in **YAML**, whilst adhering to **OpenAPI 3.0** standards for well-defined endpoints and resilient error handling
- Employed **Postman Integration Testing** to automate API requests and JSON bodies validation, safeguarding store services

WORK EXPERIENCE

Asda Superstore | Wallington | Store Colleague

Aug 2024 - Dec 2024

- Communicated clearly and effectively with colleagues across different departments to coordinate tasks for smooth operations
- Demonstrated strong **problem-solving** skills by anticipating checkout congestion during peak hours and proactively opening additional tills, reducing wait times and improving the customer experience
- Maintained strong **organisational** skills to prioritise and manage multiple tasks efficiently in a fast-paced retail environment
- Adapted quickly to changing priorities and customer needs, demonstrating flexibility and resilience under pressure