

ARNAV JAMIDAR

Masters of Engineering (Computer Science)
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Passionate learner with a good understanding of software development principles, strong analytical abilities and problem-solving skills to develop efficient and scalable software. Technology constantly excites me & increases my appetite for knowledge around software development.

Education

- ✓ Masters of Engineering - Computer Science from University of York (A Russell Group University), Year 2 student, on course to achieving a 2:1 degree classification.
- ✓ A-Levels in Maths, Computer Science, Physics from BGLC, Leicester, UK
- ✓ GCSEs from BGLC, Leicester

Technical Skills

Languages: Python, JavaScript/TypeScript, Java, SQL, HTML, CSS, C

Developer tools: VS Code, Docker, AWS, GitHub, IntelliJ, Firebase

Libraries/ Frameworks: React, Next.js, PostgreSQL, Matplotlib, Tkinter, Pandas, Spring Boot, Tailwind CSS, Framer Motion

Projects

GreenLink Logistics (Java, Python, TypeScript, Next.js) – Logistics & Route Optimization Platform

- Architected and developed a full-stack, cloud-native logistics platform to solve complex Vehicle Routing Problems (VRP) using a hybrid **Java** and **Python** backend.
- Engineered a route optimisation engine utilizing Python subprocesses to automate driver assignment and minimize delivery distances and times, optimising dispatch timing by 2.5x and reducing fuel costs by 25%.
- Built a real-time dispatcher dashboard and mobile-first driver portal using Leaflet for live map visualization, supported by RESTful APIs with polling for instant status updates.
- Implemented stateless, secure authentication and Role-Based Access Control (RBAC) using JWTs for distinct admin and driver environments.
- Containerized the application with Docker and deployed it to AWS (EC2, RDS), establishing a scalable, production-ready environment.
- GitHub Link - <https://github.com/ajamidar/GreenLink-Logistics>.

Preplt (TypeScript, Next.js) – AI-Powered Interview Preparation tool

- Developed a scalable Next.js web app with API calls leveraging Google Gemini and Vapi AI for AI-conducted interviews, real-time feedback, and custom interview generation; all implemented using a 1-to-1 call with a trained AI Voice Agent.
- Implemented secure Firebase database with custom rules and secure authentication, interactive dashboards, and a fully responsive UI with Tailwind CSS, shadcn/ui, and Framer Motion. Designed modular, maintainable architecture optimised for performance and scalability.
- GitHub Link - <https://github.com/ajamidar/Preplt>.

PremStats (Java, Python, PostgreSQL, Spring boot) – Premier League Stat Finder

- Developed a Java Spring Boot application with a PostgreSQL backend to provide rich, filterable Premier League statistics (goals, assists, xG, xA, starts, playing time, etc).
- Designed and implemented a Python-based web scraping and ETL pipeline (BeautifulSoup + pandas) to normalize and persist data into CSV/PostgreSQL.
- Implemented clean RESTful API endpoints for extensibility and integration, with modular architecture for adding new metrics and data sources.
- GitHub Link - <https://github.com/ajamidar/PremStats>.

FitMetrix (Python) – An all-in-one fitness tracker

- Built a Tkinter GUI application applying OOP principles (*Inheritance & Composition*) for maintainability, with secure login/registration, personalised diet and workout planning, BMI and body-fat calculators, and progress visualisation via *matplotlib*.
- Designed a fully normalised *SQLite3/MySQL* database with parameterised queries and aggregate functions.
- GitHub Link - <https://github.com/ajamidar/FitMetrix>.

UniFied (JavaScript, MERN Stack) – University-based marketplace

- Building a web app built on the MERN stack for university students to buy and sell preloved items within their universities, featuring secure authentication, product listings, and responsive design.
- Delivered the React-based frontend and am progressing with backend architecture and implementation.
- GitHub Link - <https://github.com/ajamidar/UniFied>.

Relevant University Coursework

Software 1: Foundations of Programming for Computer Science

- Gained hands-on experience with Python 3, covering programming constructs, basic data structures, pseudocode translation, Object Oriented Programming and unit testing.
- Worked on structured, maintainable software development using command-line tools and IDEs, with emphasis on the principles behind effective program design.

Software 2: Object Oriented Data Structures & Algorithms

- Developed object-oriented programs in Java version 17, applying principles of modularity, abstraction, encapsulation, and data hiding while integrating standard libraries and producing clear documentation.
- Designed and tested algorithms for problem-solving, including sorting, searching, and graph algorithms, with experience in asymptotic analysis, abstract data structures, and paradigms such as greedy and dynamic programming.

Engineering 1: Software & Systems Engineering

- Developed a maze game in Java 17 where we architected and deployed object-oriented programming using continuous integration (CI) and rigorous unit/system testing, while embedding the best practices into the codebase.
- Managed the full software development lifecycle (SDLC) within a collaborative team, applying formal process models to elicit user requirements, estimate risk, and deliver comprehensive technical documentation and presentations.

HCIN: Human-Computer Interaction

- Applied user-centred design methods across the full lifecycle, including user research, prototyping, evaluation, and interaction design principles (affordances, feedback, conceptual models).
- Gained experience in ethical, inclusive design practices while managing project deliverables, collaborating in teams, and reflecting on performance to enhance outcomes.

CERTIFICATIONS AND ACHIEVEMENTS

CS50's Introduction to Programming with Python – Online certification from **Harvard University**

Python Basics for Data Science – Online certification from **IBM**

Python Data Structures – Online certification from **University of Michigan**

Responsive Web Design – Online certification from **FreeCodeCamp**