

AFFAN IMRAN

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EDUCATION

The University of Manchester

Manchester, UK

BSc (Hons) Computer Science

September 2023 – June 2026

Modules: Data Structures and Algorithms, Databases, Distributed Systems, Computer Engineering & Architecture, Operating Systems, Artificial Intelligence, Machine Learning, Natural Language Processing, Cognitive Robotics

Leadership: Public Relations Lead & Events Officer (UniCS MCR), Secretary (GDG MCR), PASS Leader

EXPERIENCE

Volunteer Teaching Assistant

October 2025 – December 2025

The University of Manchester

Manchester, UK

- Guided 30+ first-year students in COMP12111 Fundamentals of Computer Engineering labs, providing personalized support to enhance understanding of course materials and practical assignments.

Software Engineer Intern

August 2025 – October 2025

Markaba

Remote

- Integrated external insurance APIs into **Django** backend for digital policy issuance and quote generation.
- Built an OCR-based PDF evaluation system to parse and assess Saudi credit reports against lending policies.
- Engineered scalable **Python (Scrapy)** and **PostgreSQL** pipelines to **automate data extraction**, and a **React dashboard** to provide data visualization for automotive marketplaces.
- Authored product guides, creating a knowledge base resulting in a **20% reduction in support tickets**.
- Collaborated in an **agile** team, contributing code reviews and daily stand-ups to accelerate delivery.

Software Engineer Intern

July 2025 – August 2025

Imago Software

Manchester, UK

- Developed features for [IMPRESS2](#), a clinical decision support tool for oncologists treating ovarian cancer.
- Automated testing and deployment with CI/CD pipelines using **GitHub Actions**, **Docker**, and **DigitalOcean**.
- Created a shared REST API interface and testing suite (Jest, Playwright, Lighthouse) to streamline development.

Software Engineer Intern

June 2024 – October 2024

Itifaq AI

Dubai, UAE

- Built a web scraping pipeline with **Selenium & BeautifulSoup** to process unstructured legal data for AI.
- Developed **REST API** controllers with **TypeScript** and **Express.js** to handle user requests and file uploads.
- Accelerated front-end development velocity by building a library of 15+ reusable **React** components.
- Utilized **React Query** for asynchronous data fetching and state management, optimizing data retrieval speed.

PROJECTS

Hex AI Agent | *Python, PyTorch, NumPy*

[GitHub](#)

- Collaborated in a 4-member team to develop a competitive Hex-playing AI agent using **MCTS** and **RAVE**.
- Implemented a bitboard representation with precomputed masks for faster win detection and move generation.
- Integrated a PyTorch residual neural network and Hex-specific heuristics for move ordering and pie-rule evaluation, contributing to a **top-15 finish out of 50 teams** in the tournament.

Muzer | *TypeScript, Next.js, Socket.IO, Redis, PostgreSQL*

[GitHub](#)

- Built a collaborative music room with real-time queuing, voting, and playback using **Web Sockets**.
- Used **Redis Pub/Sub** to sync WebSocket events across distributed instances, supporting horizontal scalability.
- Cached** queue and track state in **Redis** to reduce PostgreSQL queries and improve performance.

AskSQL | *Python, Streamlit, LangChain, Gemini API, MySQL*

[GitHub](#)

- Developed a web interface that enables users to interact with MySQL databases using natural language queries.
- Engineered a backend pipeline using **LangChain** to generate SQL queries from user input and the Google Gemini API to convert the results into human-readable responses.

TECHNICAL SKILLS

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

Frameworks/Libraries: React.js, Next.js, Node.js, Express.js, Django, Socket.IO, Tailwind, pandas, NumPy

Databases: MySQL, PostgreSQL, MongoDB

Tools & Platforms: DigitalOcean, Firebase, Appwrite, Git, Postman, Jest