# Faeq Faisal

Software Engineer London, United Kingdom

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#### **EDUCATION**

# BSc Hons. Computer Science (Software Engineering) Royal Holloway University of London, Sep. 2022 – Jul. 2025

First Class Honours

- Relevant Modules: Software Engineering, Operating Systems, Databases, Software Design, Algorithms and Complexity, Symbolic AI
- Final Year Project A Concurrency-Based Game Environment

This project involved designing and implementing a highly concurrent environment through leveraging technologies like htmx, Valkey, and nginx.

Through using an actor-based concurrency model, implemented in Gleam, targeting the BEAM (Erlang virtual machine), the system supports simultaneous game instances, real-time updates, and advanced concurrency features like racing actions.

Features a scalable, fault-tolerant architecture with robust error handling and a modular design for multiple game types, allowing for seamless multiplayer experiences.

• Small Enterprise Team Project — IT Assets Metadata Repository

This project involved developing a holistic web-based system for organizing source code assets based on metadata.

Implemented using Svelte, Express.js, MongoDB and Node.js, and used a GitLab CI/CD pipeline. Followed the Scrum methodology and agile framework, collaborating with a team of eight and coordinating tasks through Trello to meet client specifications.

Played a key role in full-stack development and database structuring, facilitating clear communication and task delegation to ensure alignment on project milestones and deliverables.

### The Heathland School, Sep. 2018 - Jun. 2022

3 A-Levels: Computer Science (A), Mathematics (B), Physics (C) 10 GCSEs including: Computer Science (9), Mathematics (7), Physics (7), English (7), Biology (8)

### PROFESSIONAL EXPERIENCE

## Pathway To Your Future Programme (Work Experience) Cisco, Feb. 2022

Gained insights into software design and development lifecycle during a one-week program, collaborating with a group of 4 professionals and completing a hands-on, self-led project.

## **Computer Science Teaching Assistant**

## Royal Holloway, University of London, Sep. 2024 - Jul. 2025

Guided undergraduates in programming labs (Python, Java, SWI-Prolog), explaining complex programming concepts and advised with debugging and other practical exercises.

Led weekly review sessions, assessed coursework, and gave feedback. Enhanced students' problem-solving skills, fostering critical thinking, while strengthening technical expertise.

# Volunteer Consultant (Computer Science) The Heathland School, Sep. 2017 - Jun. 2022

Served as Subject Captain, advising and mentoring younger students in computer education, programming, assisting with coursework, classwork, and homework. Supported learning in classrooms and extracurricular clubs through one-on-one and group guidance.

### **PROJECTS**

## Quokka

## Jan. 2020 - Present

Developed a lightweight, customizable keystroke launcher in C#, C++, WPF and .NET. Enables diverse, flexible workflows via a plugin-driven design, enabling users to extend functionality according to unique needs. Accompanied by 15 default plugins.

### **Census Map AI**

### Aug. 2024 - Present

Integrates an AI-powered chatbot with 9 datasets from UK census data (ONS 2021) and an interactive visual map to provide users with conversational, map-based demographic insights.

Constructed an intuitive platform using TypeScript, LangChain, Neo4j, and Mapbox, allowing average users to explore and understand data through interactive visualizations and AI-powered insights.

#### LLM 2 Leaf

#### Feb. 2025

Won 1st place for Verdn's Environmental Hack challenge at Royal Hackaway v8. Developed a tool to track LLM carbon footprints and auto-offset emissions via Verdn's initiatives (e.g., tree-planting). Produced during a 48-hour hackathon (team of 3), demonstrating rapid full-stack development.