Faeq Faisal

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Experienced software engineer with over seven years of dedicated work and a solid foundation in the field. Seeking an exciting position to leverage my skills and contribute to an organization devoted to excellence. Proficient in a variety of programming languages including Java, C#, C, Python, and JavaScript. Highly effective in collaborative teams, combining strong problem-solving skills and technical expertise. Eager to apply my knowledge and passion to help drive success in a formal, professional environment.

Education

Royal Holloway, University of London *In progress*

BSc Software Engineering *Sep. 2022 - Present*

- Achieved first-class (1:1) in all modules taken so far, including group projects, showcasing strong academic performance, teamwork, and practical skills.
- Developed a comprehensive understanding of the full software development lifecycle, from design, to maintenance and retirement, embracing vital concepts like the use of UML diagrams, design patterns, Agile methodologies, TDD, and Version Control.
- Acquired proficiency in writing high-quality code, aligned with industry standards, specifically Google's, utilizing essential tools like Maven, Eclipse, and JUnit.
- Acquired the ability to develop efficient programs for addressing complex problems through analyzing program performance and learning efficient data structures and algorithms for tasks like sorting, searching, and graph operations.
- Mastered database management concepts, including ER modelling and design, the relational model, relational algebra, and practical expertise in SQL.
- Learned user-centered design principles, including usability, interaction design, cognitive ergonomics, prototyping, and statistical approaches to testing, to create intuitive interfaces that enhance user satisfaction and achieve product success.

The Heathland School

A-Level; Computer Science - A, Mathematics - B, Physics - C *Sep. 2020 - Jun. 2022*

GCSE; Computer Science - 9, Mathematics - 7, Physics - 7, English - 7, Biology - 8, etc. *Sep. 2018 - Jun. 2020*

Experience

Royal Holloway, University of London

Teaching Assistant *Sep. 2024 - Jul. 2025*

- Delivered hands-on support to undergraduate students in lab sessions, explaining complex programming concepts (e.g., Python, OOP, etc.) and assisting with debugging and practical exercises relevant to various modules.
- Conducted weekly meetings to review lecture content, assess progress, and help students apply theoretical knowledge to lab work.
- Provided one-on-one and group support, fostering critical thinking, problem-solving, and collaboration among students.
- Evaluated and marked student checkpoints and milestones, ensuring comprehension of core topics and offering constructive feedback.
- Strengthened my own technical expertise in programming fundamentals while supporting students and assisting lecturers.

The Heathland School

Acting as a consultant *Sep. 2017 - Jun. 2022*

- Served as a consultant and fulfilled my volunteering role as a Subject Captain; actively supported and mentored younger students in computer education, providing valuable insights into code-related issues and problem-solving.
- Provided essential support to fellow students in their coursework, classwork, and homework assignments, fostering learning in both extracurricular clubs and the classroom.

Certificates

Nov. 2023 **Foundational C# with Microsoft**, freeCodeCamp, Microsoft

Jun. 2023 **Siemens: Virtual Work Experience [June '23]**, Springpod

Nov. 2022 **Web Development**, Mimo

Feb. 2022 **Pathway To Your Future 16-18 programme**, Cisco

Jan. 2021 **2020 - 2021 University of Kent Sixth Form Computer Science Masterclasses**, The Royal institution

Oct. 2020 **Senior Mathematical Challenge**, UKMT

Oct. 2019 **Become a Hacker**, Mimo

References available upon request

Projects & Extracurricular Activity

Royal Hackaway v6 & Royal Hackaway v7
PARTICIPANT   *Feb. 2023 & Feb. 2024*

- Participated in the challenging 48-hour hackathons, collaborating in teams of 4, to problem-solve and develop innovative solutions under tight deadlines, showcasing strong teamwork and adaptability.
- Demonstrated ability to thrive in high-pressure environments, effectively contributing to team projects and delivering results within constrained timeframes.
- Gained hands-on experience in rapid prototyping, brainstorming, and implementing creative solutions to real-world challenges.

WRDSRCH   *Java, Kotlin, Android*
CORE MEMBER   *Feb. 2023*

- A word search solver designed for Android, submitted during Royal Hackaway v6.
- As one of the backend developers on a collaborative team of three, I played a pivotal role in seamlessly integrating OCR.
- My primary objective, within this intensive project, was to ensure precise recognition and accurate passage of the grid of letters to the solution-finding algorithms, maintaining low error rates.

  https://github.com/Faeq-F/WRDSRCH

IT Assets Metadata Repository   *Node.js, MongoDB, Svelte, Express.js*
CORE MEMBER   *Jan. 2024 - Apr. 2024*

- Created during the CS2815 module 'Small Enterprise Team Project' at Royal Holloway, University of London.
- A holistic web-based system that supports the metadata-based organization of different source-code related assets.
- Served as Scrum Master in a customer-owned project, balancing technical contributions with project management responsibilities.
- Led a cross-functional team, delivering high-quality features beyond the original specification, all within five two-week Scrum sprints.
- While transitioning from front-end to full-stack development, I conducted a major rewrite to backend services and APIs to improve code readability and maintainability.

  https://github.com/Faeq-F/IT-Assets-Metadata-Repository

CensusMapAI   *Mapbox, LangChain, Neo4j, SvelteKit*
CORE MEMBER   *Aug. 2024 - Present*

- Created a user-friendly platform that enables average users to explore and understand UK census data through dynamic visualizations and AI-driven insights.
- Integrated AI agent functionality, with a graph database, to provide accurate, query-based responses and enhance data accessibility for non-technical users.
- Designed for use beyond academic studies, empowering average users in practical applications like choosing places to live, study, or vacation.
- Personally developed the algorithms for dynamically generating charts and graphs based on AI responses, and designed the UI with an interactive UK map, with color-coded 3D extrusions for data visualization.

  https://census-map-ai.vercel.app/

Quokka   *C#, WPF, .NET*
SOLO DEVELOPER   *Jan. 2020 - Present*

- Highly customizable keystroke launcher designed specifically for Windows.
- A portable application boasting a plugin architecture, enabling users to extend its functionality according to their unique needs.
- Gained proficiency in a range of programming languages and technologies, including C++, C#, XAML, WPF, and WinUI3.
- Exemplifies my commitment to versatile software development and my dedication to empowering users with tailored solutions.
- A prior iteration of Quokka's codebase, harnessed a diverse range of tools and technologies, including Node.js, Electron, TypeScript, HTML, and CSS. This allowed me to explore innovative ways to enhance Quokka's functionality and user experience.

  https://github.com/Faeq-F/Quokka
  https://faeq-f.github.io/Quokka/

ALSET   *Java, Android, LeJOS, OpenCV*
CORE MEMEBER   *Jan. 2023 - Mar. 2023*

- Created a self driving, autonomous car, during the CS1812 module 'Programming Laboratory' at Royal Holloway, University of London.
- Developed an Android app using OpenCV for pattern recognition and navigation, enabling a Lego EV3 robot to follow a track by exchanging Bluetooth messages with the robot's Java-based program.
- Implemented multi-threaded sensor communication for reliable track following and obstacle avoidance, integrating an emergency stop switch and proximity sensor for safe traversal.
- Personally focused on track recognition, measurement calculations, and real-time navigation commands, while contributing to the robot's base mechanics and sensor integration.

  https://github.com/Faeq-F/ALSET

References available upon request