Yaqin Hasan

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Cambridge, UK

Full-stack software engineer & Computer Science grad - Delivering business value by shipping impactful features.

Looking for an exciting and challenging new role where I can expand on my technical and professional skills

Experience

Cambridge Kinetics (May 2024 - January 2026)

Software Engineer

- Implemented several AI-powered workflow optimization features that cut data-entry & system configuration from hours to seconds.
- Expanded existing REST API to efficiently support bulk operations on 1000s of records at a time.
- Implemented an SMTP service that allows users to track CRM operations within a business management system.
- Developed a performant real-time data syncing service between multiple external systems and a business management system, handling various external schemas (database & API) and authentication schemes.
- Enhanced existing Stripe billing integration in order to support flexible usage-based billing.
- Responsible for the company's CI, which handles automated testing and deployment, running on local GitHub Actions runners.

Education

University of Southampton (2020 - 2023)

BSc Computer Science (Honours) - Second Class

- Specialist Modules: Advanced Computer Architecture & Systems, Real-time Computing & Embedded Systems (RTOS), Programming Language Concepts (compiler theory), Web Architecture & Hypertext Technologies (REST APIs)
- Final Year Project: "An Intelligent Approach to Navigating Environments With Compliant Obstacles"

University of Southampton, Malaysia Campus (2019 - 2020)

Engineering Foundation Year

> *83% year average (equiv. to A*A*A* A-levels)*

IGCSE (2019 - 2019)

7 A*s (2019)

> *Maths, English, Physics, Chemistry, Biology, Information Technology, History*

Projects

ThymPi - Final Year Project (2023) : Researched, designed and implemented a prototype autonomous navigation robot as a platform to demonstrate the concept of intelligently using internal sensor data to add physical context to an otherwise purely visual navigation system.

Skills: Python, OpenCV, Machine Vision, Thymio, Robotics, Autonomous Navigation, Sensors, Raspberry Pi

yaqinhasan.com - Personal Portfolio Website (2024) : Developed and self-hosted my own personal portfolio website from scratch. Challenging myself not to use frameworks, templates or managed hosting to develop a deeper understanding of the underlying technologies.

Skills: Web Development, Responsive, HTML, CSS, JavaScript, Web Hosting, VPS, DNS, AWS

flopPy - A Pure Python Stateful GUI Framework (2024) : Developed my own portable, lightweight, stateful Python GUI framework, inspired by Google's Flutter framework. This project also led to/required the development of submodules such as a pseudo-static type system and a lightweight state management library.

Skills: Python, Flutter, GUI, Frameworks, Libraries, stdlib, Tk, Tkinter, PyPI

AGILE Software Engineering Group Project (2022) : Worked in a group of 6 developers to design, implement and test a Java/JavaFX desktop application using AGILE project management principles to meet continuously evolving customer requirements.

Skills: AGILE, UML, Git, GitHub, MVC, Java, JavaFX

Structured Turtle Querying Language (2022) : Designed a structured querying language for RDF files, based on SQL concepts, and implemented an interpreter for it using Haskell, Alex and Happy.

Skills: Interpreter, Compiler, Haskell, C, Lex, Yacc, Parser, Lexer, SQL, RDF, Turtle

Skills

Multi-paradigm, language-agnostic programming

- Object-oriented programming in C#, Java, Python and more.
- Embedded/Systems programming with C (primarily for microcontrollers).
- Functional programming in Haskell.
- Scripting and process automation with Bash (Unix/Linux) and Batch (Windows).

Full stack web development

- Front-end with HTML, responsive CSS, plain JavaScript.
- Back-end and hosting with Apache, MySQL, Linux, AWS.

Desktop/Web/Mobile application development

- (desktop) Tk/Tkinter and Qt/PyQt frameworks with Python.
- (desktop) JavaFX framework with Java.
- (multi-platform/web/mobile) Google's Flutter framework with Dart.
- (multi-platform/web) React JavaScript Framework and React Native with JavaScript and TypeScript.

Development Tools & Practices

- Developing in and for both Unix/Linux environments such as Ubuntu, Debian and MacOS as well as Windows.
- Test-driven development experience including writing unit tests and functional tests.
- Proficient with Git and GitHub/GitLab version control workflows, including shared/collaborative workflows.
- Standard software build tools such as Cmake, Maven and Gradle.

Infrastructure & Hardware

- Virtualization with VMware Workstation/Fusion and VirtualBox.
- Cloud server hosting with AWS & OVH, as well as "HomeLab" home server hosting.
- Single board computer (Raspberry Pi, Jetson Nano) and microcontroller (PI pico, Arduino) electronics and robotics.
- Microsoft Office suite, remote collaboration with Teams, advanced Excel (formulas and programming), Access databases and more.

Personal Interests

- Co-founded University of Southampton's Powerlifting Club
- Competing in powerlifting at the national level
- Modding video games and map/level design
- Building custom enthusiast PCs