

# Yaqin Hasan

Portfolio: [yaqinhasan.com](http://yaqinhasan.com)

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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*

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## 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.

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## 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

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**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

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## 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

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- 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