

Joshua Walker

[Portfolio](#) [LinkedIn](#)

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MEng Computing student in my **penultimate year** at Imperial College London looking for a **6-month placement** from April - September. Interested in **games and software development**, which I fostered through university projects and solo development work that helped me build foundational teamworking and time-management skills.

Education

Imperial College London

(2022 - current)

MEng Computing course, currently in 3rd year. Achieved **first class honours** in 2nd year

Shrewsbury Sixth-Form College

(2020 - 2022)

A Levels: Computer Science - A*, Physics - A*, Maths - A*, Further Maths - A

Work Experience and Volunteering

IC Hack

(2023, 2024)

Europe's largest student-run hackathon, hosted on South Kensington Campus

- **Volunteered** throughout both days to help secure the premises and cater for the hundreds of participants and industry representatives. Collaborated with fellow students to **organise** and deliver a smooth experience for all involved, helping to handle unexpected logistical problems such as late food deliveries. I learnt how to **handle pressure** and de-escalate situations while serving food to customers, managing queues and disgruntled participants.
- Participated to discover more about different sectors of the industry through **technical workshops**, while experiencing the challenge of the hackathon and the strict **time-management skills** required. I spoke to sponsors and industry representatives to better understand the practical application of concepts studied in lectures, and developed integral **networking skills**.

In-Comm (formerly Marches Centre of Manufacturing Technology)

(2019)

Completed a week's work experience among a group of automotive apprentices, **integrating seamlessly** into an established group. Studied engines in a practical environment to better understand how software engineering techniques are applied in different engineering disciplines. Picked up practical **problem-solving skills** deconstructing retired engine blocks and brainstormed with apprentices on how to overcome the issues within a short timeframe.

Projects

Lettuce Eat (Group Project) - Flutter, Firebase, Dart

(2024)

Studied **Human-Centered Design techniques** with the Royal College of Art in order to build a student recipe-based social media Android app. Determined the needs of the target market through interviews and data-gathering techniques to ensure our product was commercially viable.

For the final deadline, my teammates and I presented the application to lecturers and fellow students, **ably demonstrating** the value of our project. When technical difficulties hampered the presentation, I improvised, holding the attention of the audience while my teammates fixed the errors.

Sorts TUI - Rust

(2024)

Developed an in-terminal utility for visualising sorting algorithms, built as an exercise in understanding algorithmic complexity. The stark contrast between developing this command-line interface and Lettuce Eat, an Android app, taught me the degree at which a commercial product is informed by its target market and their requirements.

Portfolio Website - *JavaScript, React, CSS*

(2024)

Designed and developed my own portfolio website to showcase skills and experience gained through university and solo projects. Learnt React and JavaScript fundamentals and how to deploy a website using GitHub pages, while exploring website design and its impact on user experience.

WACC Compiler (Group Project) - *Rust*

(2024)

Built an optimising compiler from scratch in Rust, using the clap, Chumsky and Ariadne crates to provide a command-line interface and clear error reporting. Designed using internal intermediate representation to allow for code generation into both **Arm32** and **Intel x86-64** assembly code.

Worked effectively in **time-constrained project** - contributed and discussed design ideas as a group and **led the group** to amicable solutions when dissenting opinions were offered.

Pintos (Group Project) - *C*

(2023)

Extended a simple **operating system framework** into a complex and developed system with features such as a priority-based thread scheduler, synchronisation primitives, system calls and virtual memory. Explored foundational concepts of OS architectures and delved into the pre-existing codebase to understand and research their practical implementations.

Managed workload effectively between group members and wrote detailed design reports to evidence our decisions.

Weather Wallpaper - *Rust*

(2022 - 2024)

Built a **command-line wallpaper engine** that dynamically changes the user's desktop wallpaper to reflect the local weather. Learnt how to access online API data and used the Dialoguer crate to provide a clean terminal menu interface for selecting weather tags for user-provided wallpaper images.

Origame - *Unity, C#*

(2022 - 2024)

Designed and developed a **2D puzzle platformer game** for A-Level coursework - attained an **A/A*** grade and has been expanded upon after submission.

Learnt problem-solving and bug-fixing techniques during the design of the complex central mechanic: 'folding' paper platforms in order to progress, providing the illusion using vector mathematics and sprite redrawing.

Practiced **level and puzzle design**, and learnt how to limit a design appetite to maintain a cohesive vision. Completed a comprehensive design document explaining game's inspirations and design methodology.

Painball - *Unity, C#*

(2021)

Pinball game developed in **7 days** for the 2021 Ludwig Jam. The theme of the jam was Foddian; participants were tasked with creating a game which emulates the frustration of popular Bennett Foddy games. I learnt the importance of **user testing and feedback**: by watching people play, I could calibrate the difficulty to ensure the game remained fun whilst adhering to the design brief.

Skills and Interests

Languages and Technologies

C, C++, C#, Rust, Java, Kotlin, Haskell, React, JS, HTML, CSS, Flutter, Git, Unity, Latex

Archery

I am a former member of Audco Archers, an archery club based at Archery GB's training facilities. Training with Olympic and Paralympic archers was hugely inspiring; among talented archers of all ages, I learnt the value of friendly competition, something that pushes me to produce exceptional work alongside my fellow coursemates.

Guitar

I am a self-taught guitarist; I learnt acoustic guitar to stay productive during the Covid-19 lockdown and have kept playing ever since. Learning an entirely new skill was a daunting task, but through gradual improvement, I built confidence in my ability to commit to rigorous self-study.