

# Joshua Walker

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## Education

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### Imperial College London

(2022 - current)

MEng Computing, third year - on track for achieving **first class** honours

## Extracurricular

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Self-taught **guitarist**, practised and studied **art** as an optional module, former member of **archery club**

**IC Hack** - Europe's largest student-run hackathon, hosted on Imperial College's South Kensington Campus

- **Volunteered** across both days to help secure the premises and cater for the hundreds of participants and industry representatives.
- Participated to engage with different sectors of the industry while experiencing the challenge of the hackathon.

## Work Experience

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### In-Comm (formerly Marches Centre of Manufacturing Technology)

(2019)

Completed a week's work experience among a group of automotive apprentices, studying engines in a cooperative environment.

## Projects

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### Dill (Group Project) - Rust, Scala, Tauri, Laminar

(2025)

Built a **interactive cross-platform debugger** for the parser combinator library Parsley (utilised in Imperial's compilers coursework), working throughout semester to deliver an app meeting both the brief of our supervisor and the needs of our fellow undergraduates.

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

(2024)

Studied **Human-Centered Design** with the Royal College of Art in order to build a recipe-sharing social media app for students, using user interviews to ensure our product was commercially viable and practical for our users.

### Sorts TUI - Rust

(2024)

Developed an in-terminal utility for visualising sorting algorithms, built as an exercise in understanding **algorithmic complexity**.

### Portfolio Website - JavaScript, React, CSS

(2024)

Designed and developed my own portfolio website to showcase skills and experience gained through university and solo projects.

### WACC (Group Project) - Rust

(2024)

Built an **optimising compiler** in Rust using the Chumsky parser library, compiling initially to an internal intermediate representation to allow for code generation into both Arm32 and Intel x86-64 assembly code.

### Pintos (Group Project) - C

(2023)

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

### Weather Wallpaper - Rust

(2022 - 2024)

Built a command-line **wallpaper engine** that changes a user's desktop wallpaper to reflect local weather, learning the fundamentals of using the **REST API** to access online data.

### Origame - Unity, C#

(2022 - 2024)

Developed a 2D puzzle platformer game for A-Level coursework - attained an A/A\* grade and expanded further after submission.

### Painball - Unity, C#

(2021)

Pinball-platformer developed in 7 days for a game jam, the theme of which was Foddian: participants were tasked with emulating the frustration of popular Bennett Foddy games.

## Technical Skills

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**Languages and Technologies:** Rust, C, C++, C#, Unity, Java, Kotlin, Haskell, Python, JS, ReactJS, HTML, CSS, Flutter, Dart, Scala, ScalaJS, Laminar, WebGL, P4, PHP, Git, Bash, Latex