

Joshua Walker

josh.walker22@imperial.ac.uk +44 7572224173 [GitHub](#)

Education

Imperial College London

(2022 - current)

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

Technical Skills

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

Work Experience

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

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.

ARMv8 Assembler and Emulator - C

(2023)

Implemented an emulator to simulate execution of an **AArch64** binary on a Raspberry PI; developed in tandem with an **assembler**, converting assembly source files to a binary executable ready for emulation.

Extracurricular

Self-taught **guitarist**. Practised and studied **Practical Art** as an optional module. Former member of an **archery club**.

IC Hack - volunteered and participated in Europe's largest student-run hackathon, hosted on Imperial's South Kensington Campus