

# Aidan Pick

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in Aidan Pick

## Education

### Imperial College London

Oct 2023 - Jul 2027

#### MEng Computing - **Predicted First Class Honours (80.51%)**

- **Year 1** - Introduction to Computer Systems; Introduction to Databases; Introduction to Computer Architecture; Laboratory 1; Discrete Mathematics; Logic and Reasoning; Graphs and Algorithms; Calculus; Linear Algebra
- **Year 2** - Algorithm Design and Analysis; Software Engineering Design; Probability and Statistics; Compilers; Computational Techniques; Laboratory 2; Models of Computation; Networks and Communications; Operating Systems

### University College School

Sep 2018 - Jun 2023

- A levels - **A\*A\*A\*A** Maths, Further Maths, Physics, Chemistry

## Experience

### InvestIN Education

Aug 2022

#### Engineering Summer Experience

- **Collaborated** with a team of four peers to create an obstacle avoiding robot
- **Enhanced presentation skills** by delivering on ethics surrounding AI and Robotics to industry professionals
- **Awarded 1st place** for material cost and **most innovative design** in an engineering contest, recognized for **problem-solving skills**

## Projects

### PintOS Operating System | C, GDB, QEMU

Oct 2024 - Nov 2024

- **Engineered and implemented key OS functionality**, including scheduling, process execution and virtual memory
- Gained deep understanding of **synchronization mechanisms** by addressing **concurrency issues** like **priority inversion**
- **Improved memory efficiency** by **lazy-loading** executables and adding **read-only page sharing** reducing memory waste
- Mastered **low-level debugging techniques** by effectively locating and debugging problems using **GDB**
- **Achieved a project score of 86%**, and **developed communication skill** by **articulating design decisions** during code reviews with professors

### WACC Compiler | CI/CD, Scala, x86-64 Assembly, Parsley (Parser-combinator library)

Jan 2025 - Mar 2025

- Built a **fully functional compiler** for a C-like language (WACC) in **Scala** from scratch in a **team of four**
- Developed a modular frontend using **Parsley**, performing **syntax and semantic analysis** with **top-down type checking**
- Implemented backend translating a **Typed AST** to **x86-64 assembly** via an IR, managing memory and runtime errors
- Improved efficiency by introducing **constant folding**, **constant propagation**, and **control flow optimisations**
- Added support for **classes**, including fields, methods, and constructors, **enabling object-oriented** features in WACC

### SEVA | TypeScript, JavaScript, Supabase, PostgreSQL, React Native, CI/CD, Gitlab Pages, Expo

May 2025 - Jun 2025

- Developed an app to **connect volunteers with local charities**, addressing the lack of accessible, short-term opportunities
- Enabled **cross-platform** capabilities using **React Native** (TypeScript/JavaScript), with **Expo** for instant hot reloading
- Integrated **Supabase** for backend with **real-time updates** via webhooks and **Row Level Security** for per-user control
- Automated deployment using **GitLab CI/CD**, building **APK releases with Gradle** and hosting them on **GitLab Pages**
- Conducted interviews with **charity coordinators and volunteers**, narrowing down on **pain points** to improve UX
- Delivered a 20-minute **live demo presentation** to judges from **Imperial College London** and the **Royal College of Art**, achieving a grade of **88%** for clarity, engagement, and technical depth

## Extracurricular & Certifications

### JPMorgan Software Engineering Job Simulation on Forage

Aug 2025

Developed a Spring Boot microservice handling financial transactions using Kafka for event processing, integrating external REST APIs, and exposing custom endpoints; demonstrated strong skills in Java, JPA/H2, and distributed system design.

- **Jazz drummer**; performances include **Royal Albert Hall** for Camden Youth Jazz Orchestra
- **Ranked 3rd** in U19 Butterfly **National School Team Table Tennis Championship**
- **Winner** of Imperial College Jailbreak 2024
- Imperial College **2nd Team Squash**

## Technical Skills

**Languages:** Kotlin, Java, Python, C, Haskell, SQL, TypeScript, JavaScript, Typst, Bash, Scala,

**Technologies:** CI/CD, Supabase, Git, Arduino IDE, React Native, PostgreSQL, GDB, Expo, Gradle, Trello, Linux, Spring,

Kafka, Maven, Rest APIs

**Concepts:** Machine Learning, Problem Conditioning and Stability, Linear Algebra, Embedded Systems, Test Driven Development