Aidan Pick

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Education

Imperial College London *Oct 2023 - Jul 2027*

MEng Computing - (Integrated Master's)

- Predicted **First Class Honours** (Overall Grade: **80.51%**)
- Relevant Coursework: Algorithms, Software Engineering Design, Operating Systems, Compilers, Networks, Databases

Technical Skills

Languages: Python, Java, C, Scala, Kotlin, Typescript/Javascript, SQL, Haskell, Bash
Technologies: React Native, Spring Boot, PostgreSQL, Git, CI/CD, Kafka, Supabase, Gradle, Maven, Linux
Developer Tools: GDB, QEMU, Expo, Trello, Arduino IDE, Neovim, Tmux

Projects

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

PintOS Operating System | *C, GDB, QEMU* *Oct 2024 - Nov 2024*

- **Engineered a preemptive priority scheduler** with semaphore-based synchronization and **priority inheritance**, resolving priority inversion and ensuring reliable execution of time-critical processes
- **Optimized memory usage** by implementing **lazy loading** for executables and **read-only page sharing**, **reducing process memory** footprint
- Honed **low-level debugging skills** by effectively locating and debugging problems using **GDB**
- **Achieved a project score of 86%** based on functionality, code quality, and design articulation during code reviews

WACC Compiler | *CI/CD, Scala, x86-64 Assembly, Parsley (Parser-combinator library)* *Jan 2025 - Mar 2025*

- Architected a **fully functional compiler** for a C-like language (WACC) in **Scala** from scratch in a **team of four**
- Developed a modular frontend with a **parser-combinator library** (Parsley) for **syntax analysis** and top-down **type checking for semantic validation**
- Engineered backend to translate **Typed AST** to x86-64, managing **stack memory**, **registers** and **runtime error handling**
- 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

Experience & Leadership

JPMorgan Software Engineering Job Simulation on Forage *Aug 2025*

- Developed a **Spring Boot microservice** to handle fincial data streams, processing events with **Kafka** and integrating external **REST APIs**
- **Exposed custom REST endpoints** for data retrival and implemented data persistence using **Java Persistence API** (JPA) with a **H2 in-memory database**

Imperial College Jailbreak Winner *Jun 2024*

- Co-led a team to victory in a **university-wide competition**, traveling the **furthest distance** from campus in 36 hours with **no money**, demonstrating **resourcefulness** and **strategic planning**

InvestIN Education - Engineering summer Experience *Aug 2022*

- Secured **1st place** in a team-based **engineering contest** for designing and building the most **innovative and cost-effective** obstacle-avoiding robot

Extracurricular

- **Jazz drummer**; performances include **Royal Albert Hall** for Camden Youth Jazz Orchestra and Imperial Big Band
- Awarded **music scholarship**
- **Ranked 3rd** in U19 Butterfly **National** School Team Table Tennis Championship
- Imperial College **2nd Team Squash**