

Ethan Range

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EDUCATION

Imperial College London <i>BEng Computing</i> <ul style="list-style-type: none">1st Year 83.3%, 2nd Year 82.6%, Dean's List for top 10% of cohort x2Modules including Databases, Software Engineering Design, Algorithm Analysis and Concurrency99% C Group Project Mark; 1st Prize 'ARM Best Overall Project'	2020 - 2023 London, UK
Loughborough Grammar School <i>Secondary School</i> <ul style="list-style-type: none">4 A*s at A level in Mathematics, Further Mathematics, Physics and Computer Science8 9s and 2 A*s at GCSE; A in FSMQ (Additional Mathematics)	2013 - 2020 Loughborough, UK

EXPERIENCE

Imperial College London <i>Undergraduate Teaching Assistant</i> <ul style="list-style-type: none">Ran small group tutorial sessions and marked problem sheets for mathematics and logic studentsAided delivery of and provided support to students for the first year lab curriculumProvided one-on-one help sessions for students studying Haskell, Kotlin, Java and C	October 2021 – Present London, UK
Marshall Wace <i>Technology Intern</i> <ul style="list-style-type: none">Undertook internship on the Infrastructure team deploying and maintaining Kubernetes clustersArchitected and implemented policy creation and enforcement system for internal team deployments	July 2022 – September 2022 London, UK
Cub3 <i>Full-stack Contract Developer</i> <ul style="list-style-type: none">Worked as part of a contractor team at a Web3 startup designing and building an MVPCreated bonus allocation tool with web app and TargetProcess integrationUtilised full stack tools including Typescript, Tailwind, Next.js, Node.js and deployed on Google Cloud	May 2022 – July 2022 London, UK

PROJECTS

WACC Compiler <i>Scala</i> <ul style="list-style-type: none">Completed project as a team of 4 to create an optimising compiler for a C like languageExtended base compiler with pointers, exceptions, graph-colouring register allocation and a Clojure transpilerImplemented full CI pipeline; achieved final mark of over 90%	January 2022 – March 2022
Neuroevolution Self-Driving Vehicles <i>Python / Typescript, Processing</i> <ul style="list-style-type: none">Developed a neural network library from scratch in Python, featuring genetic algorithms for network selectionCreated 2D physics-based top down driving simulator with ProcessingImplemented self-learning onto driving simulator allowing for track completion by vehiclesPorted project to Typescript and p5.js as interactive demo at https://neuroevolution.ethanrange.com	Sep 2019 – Mar 2020, Feb 2022
C Summer Group Project <i>C</i> <ul style="list-style-type: none">Worked as a group of 4 to create an ARM11 emulator, assembler and procedural maze generation extensionCreated full documentation, report and presentation video along with unit test suiteMade extensive use of DevOps tools including Git, GDB, GNU Make, Valgrind and custom a testing frameworkAchieved final overall mark of 99% and awarded ARM prize for 'Best Overall Project'	May 2021 – June 2021

TECHNICAL SKILLS & INTERESTS

Languages: Preferred: Scala, TypeScript, Java, C, Python; Experience with: Haskell, Kotlin, JavaScript
Frameworks / Tools: Next.js, Node.js, HTML / CSS & Tailwind, SQL, sbt, GCP
Developer Tools: Comfortable with Git, Unix / Linux, Docker. Infrastructure: Kubernetes, Helm, Proxmox VE
Languages and Music: Studying French and Russian alongside primary course, drummer in band & shows
Home lab / Self hosting: Hosting virtualised infrastructure, containerised services and backups