Eugene Lin

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Education

2018 - 2022	**Imperial College London**	MEng Computing

- Year 2: ??% overall, with first-class honours in all modules
- Year 1: 81% overall (Dean's List), with first-class honours in all modules, and 85% in programming

2011 - 2018	**Dunraven School**	Sixth Form, and Secondary School

- A Level: A*A*A*A in Maths, Further Maths, Computer Science, and Physics

Work Experience

2019 — Fire Tech Camp
- Worked as a Senior C#/Java/Python instructor, for groups of children aged 12, and up
- Received consistent positive feedback for my hands-on teaching style
- Provided me with experience on debugging code written by others

2016 - 2019 — Tutoring
- Tutored children from Year 6 to Year 10, with a focus in mathematics
- Improved communication skills, and practised how to explain challenging topics in simple terms

2015 - 2018 — Freelance Projects
- Occasionally took on clients for freelance work
- Met expectations of clients through consistent communication, and flexibility to suggestions

2017 — Zodiac Media
- Assisted in updating a legacy e-commerce site running *Magento* (PHP)
- Heavy use of version control for deployment, and *Vagrant* for web development

Projects

2020 — Optimising Compiler — Scala, ARM
- Full WACC compiler including parsing, semantic analysis, code generation, and optimisation in SSA
- Implemented a continuous integration pipeline with *Docker* and *Kubernetes* to automate testing
- Extended the language to support OOP, libraries, type inference, and metaprogramming

2019 — ARM Project — C, ARM
- Implemented an assembler, and emulator for the ARMv6 instruction set
- Designed custom PCB (with *KiCAD*), as well as the software interface for a bi-colour LED matrix
- Also assisted in implementing the extension - a Monte-Carlo Tree Search to play Connect 4

2018 — Yeetr (HackKing's 5.0) — PHP, JavaScript
- Recreated Twitter for a 90's themed challenge
- Learnt to deploy through Git, and protect against common vulnerabilities
- Implemented PHP endpoints, as well as JavaScript (with *jQuery*) for dynamically displaying feed

2018 — Untitled Game — C#, PHP, JavaScript, Python
- Generated terrain with basic MST algorithms, and generated trees with a custom mesh builder
- Enemies in the game gradually improved with the use of a genetic algorithm
- Web interface for scores, as well as a custom library for low-latency IoT lighting over a LAN

2016 - 2017 — Skype4Sharp — C#
- Only public .NET library for interacting with modern Skype chats (at the time)
- Used in a publicly available Skype bot, with a reach of over 5,000 users at its peak
- Designed an open-sourced Skype bot, featuring a plugin manager, and a permissions system

Skills & Interests

Programming	Comfortable with Scala, C# (including Unity), PHP, Python, TypeScript, and Java. Also have various amounts of experience in other programming languages, including Kotlin, Haskell, C, and JavaScript. My public projects are available on GitHub. Also comfortable with markup languages such as LaTeX.
Linux	Proficient in using the Linux command line - including managing headless servers and networks. Experience working with LAMP / MERN stack. Able to use standard programming utilities such as version control, CI/CD, and containerisation. Comfortable with automating (and scripting) repetitive tasks.
Prototyping & Design	Explored different parts of prototyping, such as designing my own PCBs. Completed an additional course in prototyping at Imperial College London, which aided in developing my skills with electronics, as well as teaching me the basics of CAD. I also have some experience in *Photoshop*, *After Effects*, and *Cinema4D*.