Eugene Lin

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EDUCATION

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

- Year 2: 85.4% overall (Dean's List), with first-class honours in all modules and 93% in lab projects
- Year 1: 81% overall (Dean's List), with first-class honours in all modules and 85% in programming

2011 - 2018	**Dunraven School**

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

WORK EXPERIENCE

2020	**Netcraft** Perl, PHP, JavaScript

- Assisted in improving and automating client-facing fraud detection services written in **Perl**
- Identified patterns in historic datasets to detect resurfacing phishing attacks
- Deployed automated detection of money laundering recruitment across social media sites

2019	**Fire Tech Camp** C#, Java, Python

- 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

2017	**Zodiac Media** PHP

- 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	**EventKiwi** TypeScript

- Cross-platform application, built with the **PERN** stack and deployed on **Heroku**, for tracking events
- Iteratively designed with regular feedback from users and the Royal College of Art
- Integrated with **Azure** for user authentication and **AWS S3** for static resource hosting

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	**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**, **Perl**, **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**.