

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** 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**.
- Volunteering Organised and ran events held by the Department of Computing Society at Imperial College London as an Events Officer. Lead a team of volunteers for the largest student-run hackathon in the UK (**IC Hack**).