


EDUCATION

- **BSc Computer Science** – University College London – 2019-2022

Have consistently achieved high grades. Notable coursework (able to provide code upon request):

- A journey planner for the  London rail network (tube & others) entirely in C.
 - * Shows paths with least station, least interchange or paths that avoid certain fare zones.
- A Tetris bot in Python which can reliably keep itself alive long enough to reach a 1000 blocks limit, and scored 3rd place in the 140 person class.
- Designed and wrote a system specification for a hypothetical good delivery service for vulnerable people during COVID, matching requests with volunteers with an efficient algorithm. Received a top submission award.
- Led a 3-person team on implementing a bash-like shell in Java, with piping, substitution, glob expansion, and 97% test coverage. Built an [online sandbox](#) for the shell with Docker, Rust and Xterm.js.

- **A-Level** – (Shenzhen, China) Nanshan Chinese International College – 2017-2019


Math, Further Math, Physics and Economics – A*A*A*A*

WORK EXPERIENCE

- **Software developer** – CORE Data Systems Ltd – Jul 2020-present (part-time)

- Educational game development for GCSE Physics/Chemistry/Biology.
- Debugged a large (200 kLOC) React project to make sure everything works on all major browsers.
- Implemented new requirements in the existing PHP (Symfony) based system.
 - * Learned PHP and Symfony concepts on the go.



COMPETITION

- **HIRED** – UK Virtual Coding Challenge – 7th Jul 2020
 - Won first place in an algorithm contest of 180 people.
 - Rewarded with £1,000 Tesco (sponsor) gift card.
- **Facebook** – Hack-a-project – 29th Feb 2020
 - Team of 4 people won second-place (against 8 other teams)
 - Designed a basic React & Nodejs App () for bringing people who want to watch the same movie together.

SKILLS

- Languages: (primary) Rust, JavaScript/TypeScript, C++; (fluent) Go, Python, Java, Mathematica (Wolfram Language)
- Web development: React, Svelte, Plain CSS & SCSS.
- Backend: NodeJS, Rust (Rocket, Diesel), SQLite, PostgreSQL.
- Linux (scripting, programming, server administration), Git, Docker; OpenGL; some Android development.
- Security (web & native) & Basic cryptography.

PERSONAL PROJECTS

- **ctclient** (): Certificate Transparency Log client – Jul-Aug 2020
 - Written in Rust, following [RFC-6962](#).
 - Supports monitoring of CT logs and checking certificates. Is able to check proofs and detect log misbehaviour. Also made an [interactive blog article on certificate transparency](#).
- **leafvote** (): Real-time live voting – Aug 2018
 - Technically a personal project, but was built for my high school to use in student union elections.
 - Like Mentimeter, except each voter gets a personal QR code printed on paper to prevent double-voting.
 - Front-end: React, backend: Node.js + MongoDB + pdflatex. WebSocket for lower latency.
 - Successfully handled 300+ voters at once.