Tingmao Wang

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micromaomao

(Jun 2021) Second year Computer Science undergraduate at UCL

EDUCATION

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

  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 $\xrightarrow{\text{Jun 2021}}$ **Lead 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.