Tingmao Wang

(Jul 2020) First year Computer Science undergraduate at LUCL



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 persons 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.
- A-Level (Shenzhen, China) Nanshan Chinese International College 2017-2019
 Math, Further Math, Physics and Economics A*A*A*A*

SKILLS

- Languages: Rust, JavaScript/TypeScript, Python, Go, Java/Kotlin, C++; TEX.
- Web development: React/Svelte, Nodejs, Webpack. Plain CSS & SCSS.
- Linux (scripting, programming, server administration and some understanding of the inner-workings), Git, Docker. Some basic experience with OpenGL and Android native development.
- · Security (web & native) & Basic cryptography. Interactive blog article on certificate transparency

PERSONAL PROJECTS

- status.maowtm.org (): simple server monitoring with web push notification Aug-Sept 2019.
 - Backend built with Rust, using the Rocket framework and SQLite database.
 - Frontend built with Svelte.
- paper.sc (): Past paper finder & search engine for a high school exam board 2016-2019
 - Average of ~9000 daily searches over 365 days (2019-2020); recommended by a number of teachers.
 - Backend built with Node.js, using MongoDB and Elasticsearch.
 - Frontend built with React, using Webpack for bundling. Acts as a PWA with ServiceWorker.
 - Made a PDF viewer: using PDF.js for rendering, wrote own input handling (touch screen & Macbook trackpad pinch-to-zoom, inertia scrolling, etc.).
 - Parses the document to find matching question numbers and hence create hyperlinks in the PDF viewer between question paper and mark scheme for the same question.
 - Includes extensive unit tests, and builds on Travis CI.
- ts-player (): a terminal recorder that produces files capable of efficient random access Jan 2019
 - Written in Go, used on Linux.
 - Uses protobuf for storage format and zstd for compression.
 - Uses the Linux termios API to execute process in monitored PTY, and a Golang binding of libvterm to parse terminal escape sequences (to get the color and position of characters right).
- go-ecbpass (n): a deterministic, stateless pseudo-random password generator Oct 2018
 - Uses scrypt to derive passwords for each website based on its domain and the user's master password.

COMPETITION

- Facebook Hack-a-project 29 Feb 2020
 - Team of 4 people won second-place (against 8 other teams)
 - Designed a baisc React & Nodejs App () for bringing people who want to watch the same movie together.

OTHER INTERESTS

- Able to do some basic 3D modelling with Blender (some works I've done); also interested in animation and design.
- · Studying university-level mathematics on my own: Analysis, Linear Algebra, Differential Equations.