QIAN (ANDY) WANG

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Education

Imperial College London   Oct 2019 to date
- Currently attending second year of Computing BEng degree.
- On track to a 1st with first-year average of 79.97%.

Ashfield School   Jan 2014 – June 2018
- Achieved A*A*A*A in Further Maths, Mathematics, Physics, and Chemistry.

Skills
- Proficient in Go and Python
- Familiar with Java, JavaScript, Haskell, and C
- Experienced with concurrency, sockets, and networking protocols
- Programming in teams
- B1 level German
- Journalistic writing

Personal Projects

Cloak 🔗   Go
- An internet censorship circumvention tool with active users in China, Russia, and Belarus.
- It works with proxy programs like OpenVPN to prevent traffic analysis-based censorship and protect the user from potential persecution.

Felix Archive 🔗   Python
- A website built with Flask and Apache Solr database enabling full-text search of digital Felix newspaper archive spanning 70 years.

iiiD6 🔗   Rust
- A random sampling-based renderer for electron orbitals in a hydrogen-like atom.

osci-render 🔗   Java
- An award-winning ICHack20 group project to render shapes, games, and 3D projections on an analogue oscilloscope using audio output.
- I designed and implemented a protocol to connect the rendering pipeline together and recreated the game "Flappy Bird".

Vimm 🔗   C
- Group project which gained full marks. A text editor with code completion feature for C.
- I implemented the terminal interface with ncurses library.

Open Source Contributions

golang/crypto 🔗   Go
- Increased the computation throughput of chacha20 in Go's official supplementary cryptography library by 4-11%.

digitalbazaar/forge 🔗   JavaScript
- Discovered and pinpointed a bug which causes DES and 3DES algorithms to produce wrong and vulnerable outputs.

gchq/CyberChef 🔗   JavaScript
- Fixed Blowfish cipher and expanded its modes of operations.
- Improved hex string parser and formatter.

Employments & Experiences

Publicity & Outreach Officer
Felix   Jun 2020 to date
- Elected to the committee of *Felix*, Imperial's student-run newspaper.
- Responsible for running social media pages.
- Used Python and Tableau to analyse survey responses and produce data visualisations.
- Advised the Editor-in-Chief on technical requirements for Felix's new website

School Assistant
Beaconhills College, Melbourne   Jan – Jun 2019
- Worked as a school assistant in Australia during my gap year.
- Ran a weekly lunchtime coding club to introduce programming basics to Year 6 – 9 students.
- Joined 9-day wilderness camping excursions with Year 9 staff and students to provide support and supervision.

Customer Advisor
Alliance Healthcare, Derbyshire   Sep 2018 – Jan 2019
- Worked for a major UK pharmaceutical supplier and provided service to business customers.

Research Placement
Nottingham Trent University   Jul 2017
- Assisted in a research project on a machine learning-based Twitter hate speech detection model.
- Provided insights on lexical patterns that the model handled poorly and reviewed the accuracy of the crowd-sourced ground truth.