

# Kelvin Zhang

## MEng Computing at Imperial College London

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### PROFILE

I am an aspiring software engineer with a strong work ethic. I started programming from a young age due to a natural curiosity of computers, which developed into a love for the satisfaction gained from building software. I especially enjoy working on difficult challenges such as computer vision and building scalable systems, where creative thinking, teamwork and experience can solve impactful problems.

### EDUCATION

#### Imperial College London

MEng Computing (Artificial Intelligence)  
2017 - 2021

#### Whitgift School, Croydon

Secondary School  
SEPTEMBER 09 - JULY 17

- A\*A\*A\* at A Level in Computer Science, Maths, Further Maths and Physics
- 10 A\*s and 1 A at GCSE; A in FSMQ (Additional Maths)
- Awarded the Arkwright Engineering Scholarship in September 2015, a highly selective scholarship which identifies and nurtures future leaders in engineering. My scholarship was sponsored by tlmNEXUS, a defence sector software company, who provided me with mentorship and funding to advance my interest in software engineering.
- Ran a student-led society, CyberSoc, educating students in cybersecurity and programming. Responsible for running lunchtime sessions, mentoring students and liaising with speakers.
- Recipient of the "OWA" graduation award for computing-related activities during my Sixth Form career which brought distinction to the school.

### WORK EXPERIENCE

#### Artificial Labs, London — (<https://artificial.io/>)

Web Developer (Intern)  
JULY 17 - OCTOBER 17 // JUNE 15 - AUGUST 15

Artificial Labs is a London-based web development company specialising in insurance products.

- upgraded and implemented new features for PHP/Laravel applications using test-driven development
- built reusable packages for core functionality (including authentication, audit logging and authorisation) from scratch to be used across multiple bespoke systems for major insurance brokers
- implemented functionality to parse and synchronise large amounts of unsorted live sports player data for AggregateX, allowing brokers to automatically keep track of their insured players

#### Poniverse — (<https://poniverse.net/>)

Web Developer (Volunteer)  
JULY 14 - SEPTEMBER 16

Poniverse is an online super-community which runs a network of websites.

- built an audit trail for the OAuth 2.0 provider responsible for authenticating users on Poniverse websites to upkeep the high standards of security required in the platform
- implemented a file caching system for an open source music hosting site, Pony.fm (<https://pony.fm/>), in order to save hundreds of gigabytes of disk space by caching music formats which are often downloaded and encoding others on demand
- implemented a versioning system for Pony.fm to allow artists to upload new versions of their tracks and revert to older versions

## NOTABLE PROJECTS

**swanntools** - January 2017 - (<https://github.com/kz/swanntools>)

Reverse engineered and built capture tools for the Swann DVR4-1200 (a CCTV digital video recorder). Involved finding vulnerabilities by inspecting network packets, writing detection scripts and building a software abstraction layer (using Go) to replace the DVR's client interface. Kept a research journal.

**Timetable Pusher** - October 2015 - (<https://github.com/kz/timetable-pusher-pebble>)

An Pebble smartwatch app which allowing users to sync their school class schedules with their Timeline (a calendar). Consists of a Pebble (C SDK) app and PHP/Laravel API. 2000 users and counting.

## TECHNICAL EXPERTISE

	Experienced with	Comfortable with	Exposed to
Languages	PHP (inc. Laravel); HTML + CSS (inc. Sass); JavaScript;	Go; Java (inc. Android SDK); Python; JavaScript; Ionic (Angular 2)	AngularJS; React; Django; Flask; C; C++; Haskell; Prolog
Software and Tools	Git; JetBrains IDEs; Vagrant; CodeShip; Bugsnag; Slack; MySQL; PHPUnit (TDD)	Gulp; Travis CI; Linux CLI (Ubuntu/Debian)	Docker; AWS (EC2, S3); Gulp; New Relic

## ACHIEVEMENTS AND SCHOLARSHIPS

**European Cyber Security Challenge Competitor** - November 2016

Cyber security competition involving attack/defence scenarios and capture the flag challenges. Chosen to be part of the UK's team after competing in national rounds held by Cyber Security Challenge UK. Worked with web application vulnerabilities and cryptography challenges.

**Cambridge Bio-Hackathon (1<sup>st</sup> Place)** - June 2016

Winning the first place prize at the Cambridge Bio-Hackathon, a five day hackathon with a synthetic biology focus, our team of six built a platform which makes cloud labs more accessible through an intuitive interface and integration with cloud laboratories.

**Corpus Computer Science Essay Prize (Runner-up)** - March 2016

Runner-up in the 2016 Corpus (Cambridge) Computer Science essay prize for an essay on the possibilities of using formal logic to store legislation.

**Leap Class of 2015** - Summer 2015

Selective summer entrepreneurship programme for aspiring tech entrepreneurs. Built the minimum viable product of a startup company in six weeks.

**Facebook Bug Bounty** - November 2012

One of the youngest recipients at age thirteen. Received acknowledgement and \$2000 USD payout for finding vulnerability exposing soft-deleted data in the Pages app.

## ACTIVITIES AND INTERESTS

- As a regular hackathon attendee, I have led teams with zero/little programming experience to attain prizes and have used hackathons to improve my project management skills and discover new technologies. I have also volunteered at hackathons such as HackGenY London.
- I hold an interest in cybersecurity, where I enjoy listening to talks and participating in bug bounties.
- I keep a blog (<https://iamkelv.in/blog/>) where I post tutorials and write-ups of my projects.
- Outside of computing, I play fives, a sport similar to squash but played with hands instead of racquets.

## REFERENCES

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