

# Qingzhuo Aw Young

veniversum.me • hello@veniversum.me • +1 (626) 365-6323

## EDUCATION

### CALIFORNIA INSTITUTE OF TECHNOLOGY

COMPUTER SCIENCE

2017-18 | Pasadena, US

Exchange year specializing in AI/ML.

4.1 GPA

### UNIVERSITY OF EDINBURGH

BSc (HONS)

ARTIFICIAL INTELLIGENCE &

COMPUTER SCIENCE

May 2019 | Edinburgh, UK

First class honours (1:1) expected.

## LINKS

[github.com/veniversum](https://github.com/veniversum)

[linkedin.com/in/awyoungqz](https://linkedin.com/in/awyoungqz)

[veniversum.me](https://veniversum.me) (Portfolio)

## SKILLS

### MOST EXPERIENCE

(5+ YEARS)

Java • Javascript • HTML

CSS/SCSS

### SOME EXPERIENCE

(3+ YEARS)

Python • SQL • Git/Hg

### PROFICIENT

(1+ YEARS)

Haskell •  $\LaTeX$  • Typescript

Node.js • C

### FAMILIAR

(WORKING KNOWLEDGE)

Android • TensorFlow • Keras

### NATURAL LANGUAGES

English *Native Language*

Mandarin *Full Professional Proficiency*

## INTERESTS

Machine Learning

Artificial Intelligence

Natural Language Processing

Distributed Computing

Data Visualization

Application Security

Network Security

## EXPERIENCE

### GOOGLE | SOFTWARE ENGINEERING INTERN

May 2017 - Aug 2017 | Singapore

- Worked primarily on Tez™- on server performance monitoring & optimization.
- Increased performance of existing system by 60-100x, drastically reducing processing times allowing for more immediate access to server statistics.
- Automated batched timeseries analysis of metrics, stored as Capacitor columnar format allowing querying through Dremel(BigQuery).
- Built server health monitoring dashboard on Typescript + Angular for engineers to identify server issues, with integrations with many other internal infrastructure.
- Nominated for peer bonus for playing an integral role in gTech's launch of automated chat support in US, EMEA & APAC regions. I integrated human handover and bot analytics w/ sentiment analysis with the system, and made it scalable planet-wide.

### OCBC BANK | SOFTWARE ENGINEERING INTERN

Jun 2016 - Sep 2016 | Singapore

- Developed the first Open Banking API in Asia, built on top of WSO2 middleware stack. Supports multi-tenant OAuth 2.0 authorization flow.
- Migrated existing APIs to JAX-RS framework and doubled the number of APIs available.
- Overhauled web application security, fixing injection, CSRF & XSS vulnerabilities, server hardening including bytecode patching of Java binaries.
- Developed Android apps to showcase APIs and realize innovative ideas.

### J.P. MORGAN | TECHNOLOGY PROGRAM SPRING INTERN

April 2016 | Glasgow, UK

- Shadowed developers and engineers in the Mobile Center Of Excellence involved in Android and iOS development.

### SUMDOG | SOFTWARE ENGINEER IN TEST (Not interested in QA roles)

Feb 2016 - May 2016 | Edinburgh, UK

- Wrote and executed formal tests based on specifications, using Cucumber framework.
- Identified and reported defects in production system and assist in resolving issues.
- Verified code changes and bug fixes prior to deployment.

### INSTITUTE OF HIGH PERFORMANCE COMPUTING, A\*STAR

DATA SCIENCE RESEARCH INTERN

2013 - 2014 | Singapore

- Data mined Twitter for tweets, targeted on location and keywords, collecting corpus of over 230,000 tweets over 6 months for local brands.
- Implemented and trained machine learning classifiers for sentiment detection in terse, informal written corpus.
- Performed parameter optimization and implemented novel emoticon detection & slang stemming to improve classifier accuracy.
- Developed web application using D3.js for visualization of analyzed data. Was able to perform time-series analysis and identify trends in public sentiment correlated with real world events.

## AWARDS

- 2017 Edinburgh Award : Office Bearer
- 2017 Edinburgh Award : Work Experience
- 2016 Edinburgh Award : Digital Ambassador
- 2016 Arthur Trevelyan Scholarship in Engineering
- 2016 HackTheBurgh ARM & Blackrock Prize
- 2016 HackLondon Domain.com Prize
- 2016 KAL Informatics Scholarship Award
- 2016 StacsHack Bloomberg Prize
- 2016 SmartDataHack Dixons Carphone Prize
- 2015 1st Place UoE Informatics Functional Programming Competition
- 2015 Hackathon@SG
- 2014 2nd Place Geekcamp CTF

## VOLUNTEERING & ORGANIZATIONS

### **GOOGLESERVE** | VOLUNTEER

June 2017 | Singapore

Helped with the development of GUI component of Scratch 3.0, and help host intro to coding workshop for youths.

### **PREWIRED** | MENTOR

Feb 2016 – Mar 2017 | Edinburgh

Volunteer mentor teaching Javascript & Python at Prewired Edinburgh, an after-school programming club for under 19s.

### **COMPUTING & AI SOCIETY (COMPSOC)** | VICE PRESIDENT

Mar 2016 – Mar 2017 | University of Edinburgh

Management of society, sponsorships and hosting talks and other events for over 250 members.

## PROJECTS

### **GITHUB VISUALIZER** | [WEBSITE](#) • [GITHUB](#)

Provides an at-a-glance overview of the a GitHub repository and makes exploring large and complex projects a breeze. Visualizes the structure of a repository using a force-directed graph layout.

Built with D3.js. Created at StacsHack 2016. Winner of Bloomberg's Favourite Project. Featured on ProductHunt, LifeHacker, front page of HackerNews and trending on GitHub.

### **THIS IS SKYNET** | [WEBSITE](#) • [GITHUB](#)

Visualizes air traffic in an interactive 3D globe using data scraped from Skyscanner API. Shows frequency and volume of inbound and outbound flights between countries.

Flight routes are represented as links between countries. Inbound routes are shown as blue links, while outbound routes are shown as red links.

Built on three.js during HackLondon 2016.

### **HACKPROPHECY** | [WEBSITE](#) • [GITHUB](#)

A machine learning project that predicts whether a project submitted to a hackathon is a winning project. SVM classifier was trained on data scraped from over 30,000 projects made at 1000+ hackathons on DevPost. Testing revealed accuracy of around 95%, with good precision and almost perfect recall.

### **MANDELBROT FRACTAL GENERATOR** | [GALLERY](#) • [GITHUB](#)

A program written in haskell that draws Mandelbrot fractals. It is capable of generating stunning high resolution renders, both stills and animated, of the Mandelbrot set fractal featuring smooth colorful gradients.

Capable of leveraging multiple cores for rendering, and highly customizable output (see gallery).