# Yuanjie (Jerry) Zhao

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## Technical Skills

**Languages**: Java, JavaScript, HTML/CSS, C/C++, SQL, Typescript, Python, Racket

**Other**: Browser Rendering Engine, Machine Learning, Linux, Git, Agile Development, Functional Programming, OOP, REST API, Embedded System, Photoshop, MATLAB, Physics Modeling

## Education

**B.Sc., Computer Science and Physics, with Distinction**

University of British Columbia

Graduated in May 2019

Computer Science Grade: 90%

Overall Grade: 85%

## Scholarships

Faculty of Science International Student Scholarship, 2018

International Major Entrance Scholarship, 2014-present

Chancellor's Scholar Award, 2014

## Volunteer

**Charity Show at School**

Organized a charity show with other students. I was responsible for hiring volunteers, coordination and event promotion. We sold 500 tickets after two months of preparation and donated all raised money to the Red Cross for post-earthquake children.

**Raleigh International**

Collaborated with a team of volunteers to build modern pit toilets and improve hygiene system in Malaysian rural areas, in order to reduce the risk of infectious disease.

## Work Experience

**Web Developer, Intern**                                        Summer 2018
**Xiaomi Technology, Beijing**

- Translated design team's mockups into responsive and interactive UI in Xiaomi Game Box App, using HTML, CSS, JavaScript and doT.js
- Reduced the rendering time of two ranking pages by 30% by eliminating unnecessary compositing layers
- Improved the conversion rate of a mobile game by 10% after trying out five different design of the homepage using A/B testing
- Rewrote internal documentation system in a more readable style using GitBook and Markdown to reduce training cost of new team members
- Extended Xiaomi analytics engine to support event tracking for YouTube Embedded Players

**Research Assistant**                                        Summers 2016 and 2017
**UBC Industrial Automation Laboratory, Vancouver**

- Developed a sensor network for dynamic environmental monitoring using low-cost mobile robots in collaboration with other researchers (this system is deployed in India)
- Wrote a C program on Raspberry Pi that can wirelessly control speed, movement, and data collection of the robots using laptops
- Co-Authored "Automated Water Quality Survey and Evaluation Using an IoT Platform with Mobile Sensor Nodes," Sensors, 2017

## Technical Projects

**Full-stack local restaurant recommendation web app**

- Designed an interactive UI (HTML, CSS, JavaScript, AJAX) for users to search nearby restaurants
- Constructed a web service (Java servlet, REST API) to fetch local restaurant data from Yelp API based on users' geolocations
- Used a MySQL server to store real restaurants data, along with users' favorites and search history for future recommendation
- Developed a content-based recommendation algorithm based on users' favorites and search history
- Deployed to Amazon EC2

**Query engine for university courses**

- Built a query engine in Typescript and Node.js to answer queries about UBC course offerings
- Used ES6 Promise and JSZip to asynchronously parse UBC course data files
- Created a web services providing REST APIs using Restify framework

**Bus Finder Android App**

- Used OSMDroid API to display a map and plot the user's location
- Constructed the feature to search the nearest bus stop and bus schedule
- Built a web service in Java to retrieve and parse real-time bus arrival information from TransLink Open API

**Mini-compiler written in Java**

- Implemented parser, type checker, intermediate representation, instruction selection, liveness analysis and register allocation

**GPS tracker using C and MSP430 microcontroller**