

# Yuanjie (Jerry) Zhao

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## Technical Skills

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

**Other:** Browser Rendering Engine, Machine Learning, Linux, Git, Agile Development, Functional Programming, Embedded System Programming (Raspberry Pi, MSP430), Photoshop, LaTeX, MATLAB, Physics Modeling

## Education

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

University of British Columbia

Graduating May 2019

GPA: 3.95/4.33

CS GPA: 4.30/4.33

## Scholarships

Faculty of Science International Student Scholarship, 2018

International Major Entrance Scholarship, 2014-present

Chancellor's Scholar Award, 2014

## Volunteer Experience

### Charity Show at School

As the major organizer in the student team, I was responsible for hiring volunteers, making advertisement, scheduling, and coordination. We sold 500 tickets after two-month preparation and raised ¥13,000 for post-earthquake children. All donation went to the Red Cross.

### Raleigh International

Collaborated with a team of European students to build a hygiene system in Malaysian rural areas.

## Work Experience

### Front-End Developer Intern

Summer 2018

#### Xiaomi Technology, Beijing

- Translated design team's mockups into responsive and interactive interfaces in Xiaomi Game Box App, using HTML, CSS, JavaScript and doT.js.
- Improved the conversion rate of a mobile game by 30% by trying out five different versions of the game's homepage.
- Reduced the rendering time of two ranking pages by 50% by eliminating unnecessary composting layers.
- Rewrote internal documentation system in GitBook and Markdown to reduce training cost for new team members and to encourage more readable documentation.
- Extended Xiaomi analytics engine to support event tracking for YouTube Embedded Players.
- Designed reusable UI components for all front-end teams.

### Research Assistant

Summers 2016 and 2017

#### UBC Industrial Automation Laboratory, Vancouver

The research aims to replace traditional static environmental monitoring with dynamic monitoring using low-cost mobile robots.

- Co-Author, "Automated Water Quality Survey and Evaluation Using an IoT Platform with Mobile Sensor Nodes," Sensors, 2017
- Designed a remotely-operated vehicle for environmental monitoring using Raspberry Pi and BlueROV.
- Developed a C program to wirelessly control the vehicle via laptops.

## Technical Projects (some projects are accessible on my GitHub)

- In a team of two, constructed a query engine in Node.js that could query university courses and rooms and support RESTful Web service.
- Created a disassembler in C that could reverse engineer machine code into Y86 assembly.
- Wrote a C++ library for processing bitmap, capable of decompressing, rotating, pruning, and saving image.
- Built a GPS tracker based on MSP430 microcontroller.
- Implemented an interpreter in Racket, supporting arithmetic operations, mutation, continuation, named functions, and type checking.
- Implemented a bus route search Android App for Vancouver area, capable of searching the nearest bus stop, routes number and arrival time.