

# ZHEHAI ZHANG

*A student dedicated to making an impact in the tech industry.*

## Contact

✉ [zhehai@zhehaizhang.com](mailto:zhehai@zhehaizhang.com)

☎ (226) - 280 - 8525

🌐 [zhehaizhang.com](http://zhehaizhang.com)

🐙 [github.com/fairnightzz](https://github.com/fairnightzz)

🌐 [linkedin.com/in/zhehai](https://linkedin.com/in/zhehai)

📄 [devpost.com/fairnightzz](https://devpost.com/fairnightzz)

## Skills

### Languages:

C, C#, C++, Java, JavaScript,  
HTML/CSS, PHP, Python, LaTeX,  
SQL, GraphQL

### Frameworks:

Node.js, Vue.js, Nuxt.js, Unity,  
React, Vuetify, Tailwind CSS

### Tools:

Git, Docker, Linux Administration,  
Cloudflare, NGINX, Adobe CC,  
Firebase, PostgreSQL

### Hardware:

Arduino, Mixed Reality/Vive  
Headsets, Kinect 360, Leap  
Motion

## Education

### University of Waterloo

Bachelor's of Computer Science  
Digital Hardware Specialization  
Expected Graduation: 2025  
GPA: 3.99

Relevant courses:

- Elementary Algorithm Design  
and Data Abstraction  
(Advanced Version)  
- Designing Functional Programs  
(Advanced Version)

## Projects

### SubSpace - HackTheNorth 2020 ++ 📧

January 2021

- Won the finalist award, placing top 24 out of 3000+ participants
- Developed a way to remotely deploy and share virtual machines with coworkers
- Used Node.js, NoVNC for live collaboration and combined Nuxt.js/Vuetify for frontend

### 9it - Version Control System Command Line Interface 📧

February 2021

- Implemented Git from scratch in C and packaged for linux distros such as Debian/Arch
- Actualized internal features such as adding, commits, and the hash tree structure

### ARitus - MIT Reality Virtually Hackathon 📧

February 2019

- Developed a rehabilitation tool using the HTC Vive Pro Headset which helps people with arthritis regain mobility using augmented reality exercises
- Implemented hand-tracking using Leap Motion Orion and Unity

### DiscourseVR - Remote Debate Analyser 📧

April 2021

- Developed a remote solution for feedback/recording of virtual parliamentary debates
- Used Mirror, Networking Dissonance, and Networked Sound RockVR along with the Mixed Reality Headset for the virtual reality experience, and deployed a webapp using Tailwind CSS and Nuxt.js to display the recording and live feedback chat

## Experience

### CodeReach Program - Teacher 📧

2019-2020

- Taught a class of elementary school students about the basics of Python and Pygame
- Prepared in depth lessons, exercises, and designed laptop stickers for the students

### MasseyHacks VI - Hackathon Executive 📧

2019-2020

- Managed logistics behind workshop livestreams, and designed graphics for the event

### Computer Science Club - Junior Leader 📧

2019-2020

- Taught competitive programming techniques and algorithms to high school students
- Organized local programming competitions on self-hosted online judge

### Chess Club - Leader

2017-2020

- Organized official qualifier tournaments for the annual Ontario Chess Championships
- Lead the team to win the Ontario High School Chess Tournament 2 years in a row

### Canadian Young Physicist's Tournament - Bronze Medalist

March 2020

- Used numpy, matplotlib and panda to interpret challenging physics problems
- Developed computer simulations in MATLAB and Anylogic involving aerodynamics, fluid dynamics, and magnetism

## Awards

### René Descartes National Scholarship

- 2nd highest Math Scholarship valued at \$20 000, awarded to 15 distinguished students

### Loran Scholar's Foundation Semi-Finalist

- Selected from 5194 applicants based on evidence of character, service, and leadership

### Canadian Computing Competition Senior

- Placed Top 8% out of 2700 students nationally

### First Lego League Youth Mentor Award

- 2 times First Lego League Ontario Mentor Recipient out of 100+ teams