

# Harry Zhang

Software Developer

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## Skills

### Languages

C++, Javascript, Java

### Tehnologies

Node.js, React.js, HTML/CSS,  
Git, Docker, Unity3D

## Awards

Ubisoft Next 2020 Finalist  
WorldSkills 2019 Competitor  
Skills Canada 2018 Gold Medalist  
Skills Canada 2017 Gold Medalist

## Hackathons

TreeHacks 2020 Gold Medalist  
Hack the North 2019 Winner  
Hack the North 2018 Winner  
MasseyHacks III Gold Medalist  
Hack the North 2016 Winner

## Volunteering

### Gift Card Bank

Backend Developer Node.js  
• Created **backend API** for users authentication, applications, and gift card distribution

### SheHacks Mentor

• Assisted over **25 hackers** at Canada's largest 24 hr all-female hackathon

### Waterloop

Software Co-Lead C++  
• Lead the development of hyperloop pod for **SpaceX's 5th Competition**

## Education

### University of Waterloo

Computer Engineering, BAsC Candidate

09/2018 - 06/2023

• Colonel Hugh Heasley Scholarship (\$10k) awarded to 4 students yearly

## Experience

### AMD

#### Windows Core Software Developer

Jan - Apr 2020

- Worked on the Kernel Mode Driver (KMD) team to deliver bug fixes, updates, and features to the AMD Unified Graphics driver
- Interfaced with **Microsoft Display Driver Interface** (DDI) and the AMD Display Layer Abstraction (DAL) interface in **C++**
- **Optimized stack usage** in specific scenarios **by 40-60%**,
- Fixed bugs affecting the Radeon Overlay and Display Output Post-Processing

### IBM

#### Software Developer

May - Aug 2019

- Maintained and updated IBM's Risk and Compliance Management website, OpenPages, using **JavaScript, Sass, React, MobX**, and **Java**
- Independently brought up a **new React component**, end-to-end
- Conducted code reviews with other developers and collaborated with QA and design teams bringing several other features and over **50+ bug fixes**

### WorldSkills Competitor

#### Web Technologies

May 2018 - Aug 2019

- **Represented Team Canada** at the 45th International WorldSkills Competition
- Competed against 32 of the world's best web developers in a 4-day, offline, non-assisted, hackathon-styled event
- Used a mobile-first design approach to mock up 3 different websites in **CSS**
- Created 2 **REST API** backends (in **PHP** and **Laravel**), 2 games (in **JavaScript**), and 4 full-stack websites (using Nginx, **MySQL**, JavaScript and PHP)

## Projects

### Neutral

Javascript

<http://shopneutral.io/>

- Created a **Chrome/Firefox Extension** that allows consumers to better understand carbon emissions of their online purchases and ways to offset it
- Developed user authentication and purchase API, created extension frontend, and used Google **Machine Learning** API to recognize product CO2 emissions
- Worked in a diverse group of 6 designers, business analysts and developers
- **Won the Moonshot (1st Place) Prize at TreeHacks 2020**
- **Awarded \$12.5k as a part of Mozilla's Fix-The-Internet Incubator**

### Orbit

C++

- Developed a 2D two-player survival shooter game in a full **n-body newtonian physics simulation**
- Applied **OOP Design Patterns** such as Singleton, Strategy, and Observer

### Unbounded

Unity3D, C#

- Built a '**non-euclidean**' virtual reality proof-of-concept game
- Developed a method to unrestrict the player's virtual world from the limits of the physical world allowing for an **infinite gameplay area** in the same physical playspace **without breaking immersion** in virtual reality
- **Won at Hack the North 2019**