

# Sunny Zuo

✉ me@sunnyzuo.com | 🌐 sunny-zuo | 🔗 sunnyzuo.com | 🌐 sunnyzuo

## Skills

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**Languages:** JavaScript, TypeScript, Java, Python, C, C++, ActionScript 3, HTML/CSS

**Technologies:** Node.js, React/React Native, Angular, MongoDB, Express, socket.io, Flash, Adobe AIR

## Experience

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### ECSSEN Career School

Calgary, AB

SOFTWARE DEVELOPER

Jul 2020 – Nov 2020

- Built and deployed DeFi (decentralized finance) **smart contracts** using **C++** for **EOSIO blockchains**
- Designed and developed a frontend to allow users to interact with smart contracts using **React, eosjs, and scatterjs**

### YYC Science Bowl

Calgary, AB

DIRECTOR OF TECHNOLOGY

May 2019 – Aug 2020

- Designed and built a website to reach interested participants, increasing the number of competitors by **over 30%**
- Created custom web-based buzzer solution for competition use using **Angular, Node.js, Express, and socket.io** increasing buzzer accuracy to **100%**

### University of Calgary

Calgary, AB

ASSISTANT INSTRUCTOR

Aug 2018, Aug 2019

- Assisted students with designing, building, and debugging software built using **ActionScript 3 and JavaScript**
- Created and taught lesson on building multiplayer games using **websockets** and deploying servers to **Heroku**
- Received **100% positive feedback** from instructors and 30+ students

## Projects

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### SmartGarden

sunnyzuo.com/garden

- Created full stack mobile application using **MongoDB, Express, React Native, and Node.js** for smart plant management
- Designed and developed **Android** app UI with **Material Design**, allowing users to view plant health metrics and issue commands
- Utilized serial ports for bidirectional communication between the server and Arduino, allowing commands triggered via a **REST API** to be executed and plant health metrics measured to be aggregated and stored in a **MongoDB** database

### Sir Goose Bot

sunnyzuo.com/goose

- Created an authorization layer on Discord using UWaterloo's LDAP, supporting **800+ users** with **Node.js, MongoDB, and Discord.js**

### Arbitrage Finder

- Developed tool using **Node.js** that aggregates odds data from a number of sports-betting platforms utilizing **GraphQL APIs, REST APIs**, and web scraping using **Puppeteer**
- Designed algorithm to analyze data and match identical markets and events to find arbitrage opportunities

### Cybersecurity CTF Writeups

sunnyzuo.com/ctf-writeups

- Authored writeups for various cybersecurity/infosec **CTF (Capture the Flag)** event challenges
- Solved challenges primarily centered around web exploitation skills such as **XSS attacks, SQL Injections**, path traversal attacks, and general scripting in **JavaScript and Python**
- Built website to display writeups using **Gatsby** and **GraphQL** that automatically creates writeup pages from Markdown

## Awards

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Sep 2020 **President's Scholarship of Distinction**

University of Waterloo

Mar 2020 **Think Award and Invitation to World Championship**

Awarded for the most effective and innovative use of programming in provincial championships

VEX Robotics

## Education

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### University of Waterloo

Waterloo, ON

CANDIDATE FOR BACHELOR OF SOFTWARE ENGINEERING (BSE), HONOURS

Sep 2020 – Apr 2025

93.8% GPA, SE Soc Representative