

# Daniel Zhao

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## EDUCATION

### University of Waterloo

Honours Bachelor of Computer Science (Co-op)

GPA: 93.7%

2024 – 2028

## TECHNICAL SKILLS

**Languages:** C, C++, C#, Python, HTML, CSS, JavaScript, TypeScript, SQL, Racket

**Technologies:** React, Next.js, Express.js, Node.js, Flask, Tailwind CSS, Unity

**Tools:** Git, Bash, Linux, Docker, Postman, Figma, MongoDB, PostgreSQL, Firebase, AWS, Vercel, Ollama

## EXPERIENCE

### Waterloo Aerial Robotics Group

Apr. 2025 – Present

Autonomy Software Developer

Waterloo, ON

- Developing autonomous navigation algorithms in **Python**, enabling drones to identify and land on targets with less than **2cm** precision.
- Implementing object detection with **Ultralytics YOLOv8** and **OpenCV** for real-time landing pad recognition, achieving **95%** detection reliability.

### Classic Acupuncture Inc

Mar. 2025 – Present

Web Developer

Edmonton, AB

- Building a responsive company website using **Next.js**, **Tailwind CSS**, and **TypeScript** to improve client accessibility, mobile usability, and **SEO** performance.
- Developing a content management tool with **Express.js** and **PostgreSQL**, enabling staff to update clinic announcements via **RESTful APIs** to improve site flexibility.

### Waterloo Reality Labs

Sep. 2024 – Apr. 2025

Software Developer

Waterloo, ON

- Created a Universal Text Prompter in **Unity** using **C#**, enabling real-time interaction with AI-driven text representation in VR to improve accessibility for users with auditory impairments.
- Enabled real-time model comparison across **4+ LLM backends** (Llama3, Deepseek, ChatGPT, Gemini), allowing users switch between local models (**Ollama**) or cloud-based APIs in under **1 second** through a unified interface.
- Integrated voice interaction with LLMs by implementing **OpenAI Whisper**, reducing user input time by **5x**.

### Harry Ainlay Math and Computer Club

Sep. 2022 – Jun. 2024

Club President

Edmonton, AB

- Led weekly lessons on math problem solving and computer science concepts for **30+** students, increasing recurring attendance by **40%**.
- Organized school-wide events with **100+** participants including a math tournament, Pi Day activities, and competitive programming contests.

## PROJECTS

### 🔗 Personal Website | *Next.js, Tailwind CSS, TypeScript*

- Built a responsive personal website using **Next.js** and **Tailwind CSS** to showcase projects and skills.
- Optimized for performance and **SEO** with static generation and semantic design, improving visibility.

### 🔗 ChordCraft | *JavaScript, React, Firebase, ABCJS*

- Developed a **React** app with an interactive piano interface that renders sheet music in real time using **ABCJS**.
- Used **Firebase** to support user authentication and persistent compositions for **20+** trial users.

### 🔗 Terra | *C#, Unity, AR Foundation, ARCore*

- Created an **AR mobile app** that lets users place 3D blocks in physical spaces using **Unity** and **ARCore**.
- Implemented **raycasting** and touch controls improving object placement precision by **70%**.

### 🔗 TrashMap | *Python, Streamlit, Google Cloud Vision API, OpenAI API*

- Developed a web app that classifies waste with **GCV API** and suggests disposal guidance using **OpenAI API**.
- Mapped **100+** disposal sites by integrating **Maps API**, reducing waste misclassification by **50%** among users.