

Daniel Zhao

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EDUCATION

University of Waterloo

Honours Bachelor of Computer Science (Co-op)

GPA: 4.0

Sep. 2024 – Apr. 2029

TECHNICAL SKILLS

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

Technologies: React, React Native, Angular, Next.js, Express.js, Node.js, Flask, Django, Tailwind CSS, Unity

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

EXPERIENCE

Cineplex Digital Media

Sep. 2025 – Dec. 2025

Software Developer

Waterloo, ON

- Built an interactive analytics dashboard with **React** and **Flask**, creating **RESTful API** endpoints to display relationships between on-screen ads and Kinect-tracked physical movements.
- Designed data pipelines using **Python** and **SQLite** to process sensor data and support engagement analysis.
- Developed a robust server-upload service in **C#** and resolved key data handling issues for a user engagement analytics system deployed to over **70** digital signage units.
- Created a real-time people counting system using **2D LiDAR**, integrating clustering and a **Random Forest classifier** to detect and track individuals in open spaces.

Waterloo Aerial Robotics Group

May. 2025 – Aug. 2025

Autonomy Software Developer

Waterloo, ON

- Developed an autonomous landing module in **Python**, implementing configurable target selection algorithms that enable drones to identify and land on targets with under **2cm** precision.
- Implemented object detection with **Ultralytics YOLOv8** and **OpenCV** for real-time landing pad recognition, achieving **95%** detection reliability.

Waterloo Reality Labs

Sep. 2024 – Apr. 2025

Software Developer

Waterloo, ON

- Designed a context-aware prompting interface in **Unity** using **C#** that captures user gaze, proximity, and object interactions to drive personalized feedback in a VR environment.
- Built a unified integration layer across **4 LLM backends**, allowing seamless switching between cloud-based APIs and local models run via **Ollama** for flexible model evaluation.
- Integrated voice interaction with LLMs by implementing **OpenAI Whisper**, reducing user input time by **5x**.

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 allows users to place 3D blocks in physical spaces using **Unity** and **ARCore**.
- Implemented **raycasting** and touch controls improving object placement precision by **70%**.

🔗 TrashMap | *Python, Google Cloud Vision API, OpenAI API, Google Maps Platform*

- Developed a web app that classifies waste with **GCV API** and suggests disposal guidance using **OpenAI API**.
- Mapped **100+** disposal locations using **Google Maps Platform**, reducing user search time by **50%**.