

DUNDEE ZHANG

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EDUCATION

University of Waterloo

Bachelor's of Computer Science | 3.9/4.0

Waterloo, ON
Sep 2024 - Apr 2028

- **Societies:** The Mathematics Society - **First Year Representative** and **Councilor Director**
- **Clubs:** Computer Science Club - **External Affairs Executive** and **Office Manager**
- **Design Teams:** Electrium Mobility - **Web Developer** - Wrote scripts to allow renting vehicles on the store.

EXPERIENCE

Ignition Hacks | Mentor

Aug 2024

- Mentored over **500** students in **JavaScript**, **TypeScript** and **Python** with **React** and **Flask**.
- Facilitated one-on-one sessions, empowering students with **hands-on** experience with **AI**, **CV**, and **NLP**.
- Assisted to integrate **Language Models** and **Computer Vision** into projects with **REST** and **POST** APIs.

NRGHacks | Co-Founder and Judge

Aug 2023 - Jun 2024

- Established a **school-board** and **SHSM recognized** hackathon for students within the York Region.
- Collaborated with **educators** and **professionals** to create a learning and networking environment for participants.
- Raised over **\$1000** for multiple high school computer science clubs totaling over **200 hackers** overall.

Newmarket Computer Science Club | President

Sep 2023 - Jun 2024

- Ran **hackathons** and **club fairs** to introduce over **200 students** to computer science within the town.
- Organized weekly club meetings to **teach university-level** computer science concepts to junior students.
- Fostered an **innovation** friendly environment with regular **hackathons** and **game jam** contests.

Town of Newmarket | Lifeguard, Swim and Lifesaving Instructor

Sep 2022 - Jun 2023

- Trained students in lifesaving through the Bronze Medallion Course with over **70%** pass rate.
- Coordinated with lifesaving team to enforce pool **safety** protocols and ensure a **swift** response to emergencies.
- Taught and planned well-constructed swimming and lifesaving lessons for **persons with disabilities**.

PROJECTS

Aura(nate) | Python, JavaScript, Flask, Firebase, HTML, CSS, GPT-4o, Dall-E 3

Feb 2025

- Achieved over **20** unique user **sign-ups** within the first **24 hours** of product launch.
- Integrated **AI** into a professional career development toolkit using **Flask** and **JavaScript** in **backend**.
- Leveraged **Firebase** to ensure the **security** of the app and to **streamline** user sign-up experience by **400%**.

AI-Enhanced To Do List | Python, Flask, SQLAlchemy, GPT-4o, HTML, CSS

Jan 2025

- Designed an **AI powered** To-Do list that **automatically generates** subtasks for the users tasks.
- Engineered prompts to achieve **100% realistic** and **useful** subtasks for the user to complete.
- Incorporated **SQLAlchemy** database to store the task list locally to ensure usefulness and **privacy**.

GoTerpret Bash Shell | Go

Dec 2024

- Built a **Bash shell interpreter** from scratch using **Go**, allowing shell **commands**, **piping**, and **redirection**.
- Implemented built-in commands such as **cd**, **exit**, and **echo**, providing a simplified shell environment for users.
- Integrated **error handling** to ensure proper execution and **improve** the **stability** of the shell interpreter.

Portfolio and Blog | TypeScript, Node, React, CSS, HTML, Markdown

Aug 2024

- Constructed portfolio and blog with **user commenting**, **contact form**, and **markdown interpreter**.
- Crafted **reactive** and playful **animated** elements throughout the webpages with **mobile compatibility**.
- Automated **CI/CD** through **Cloudflare Workers and Pages** to allow for easy website updates/tweaks.

Data Structures and Algorithms: Contest Solutions | C++, C, Java, Python

Feb 2024

- Solved complex math problems using **graph theory** and **abstract data structure** concepts.
- Optimized most algorithms used to be the **optimal time complexity** to obtain full marks in contests.
- Achieved **Honor Roll (top 3%)** as well as **Distinction** in the **Canadian Computing Competition**.

AWARDS

Rich Media - Aivars Petersons Memorial Award | University of Waterloo

Jun 2024

- **One award**, given annually to an **outstanding** undergraduate student entering Year One of any program in the David R. Cheriton School of Computer Science.

SKILLS & INTERESTS

Languages: C, C++, Go, HTML/CSS, Java, JavaScript, Python, Racket, Scheme, TypeScript

Frameworks: Bootstrap, Flask, Java Swing, MongoDB, Next.js, React, SQLAlchemy, TailwindCSS

Tools: Bash/Linux Shell, Cloudflare, Docker, Figma, Firebase, Git, MongoDB, Node.js, Vercel, Vim, Vite, VS Code