# Dundee Zhang

dundeezhang.com | dh2zhang@uwaterloo.ca | linkedin.com/in/dundeezhang | github.com/dundeezhang

## 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, GitHub, MongoDB, Node.js, Vercel, Vim, Vite, VS Code

## EDUCATION

**University of Waterloo**                                                                                   Waterloo, ON
*Bachelor's of Computer Science – GPA: 3.9/4.0*                                  *Expected Graduation: 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 High School 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 platform whilst **streamlining** user sign-up experience by **400%**.

**Portfolio and Blog** | *TypeScript, Node, React, CSS, HTML, Markdown*                  Aug 2024 – Jan 2025
- 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.

**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.

**Algorithms and Data Structures: Contest Solutions** | *C++, C, Java, Python*              Sep 2022 – 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.