

# Dongwan Seoh

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## TECHNICAL SKILLS

**Languages:** Python, C, C++, R, SQL, Java, TypeScript & JavaScript, HTML & CSS

**Frameworks and Libraries:** PyTorch, FastAPI, Flask, React.js, React Native, Next.js, Svelte, SvelteKit, Tailwind CSS

**Developer Tools:** Git, GitHub, VS Code, Linux, Figma, Blender

## EXPERIENCE

### Software Engineer

Oct 2025 – Current

*UW Orbital*

- Develop front-end interfaces for satellite mission tooling using **React** and **TypeScript**.
- Write and maintain **unit** and **integration tests** to ensure reliability across core modules.

### Front-End Developer

Sep 2023 – Jun 2024

*SolveXchange*

- Built responsive front-end pages using **HTML**, **CSS**, and **JavaScript** and surpassed **50 users**.
- Implemented a user authentication system using **Flask** and **SQLAlchemy**, including database schema design.
- Integrated back-end endpoints and improved UI structure for clearer workflows and easier navigation.

## PROJECTS

### Personal CRM |

Sep 2025 – Current

- Built full-stack contact management application using **Next.js**, **FastAPI**, and **Supabase**, implementing **JWT authentication**, email verification, and **CRUD operations** for secure user data management.
- Developed automated auth sync system with Python and PostgreSQL triggers, maintaining data consistency.
- Enforced security features like rate limiting with **SlowAPI** and Row Level Security policies, preventing API abuse

### Melodie.ai |

August 2025 – Current

- Developed an **LSTM-based** neural network with **PyTorch** to generate folk melodies, reaching coherent sequences
- Designed probabilistic sampling system with temp. control and nucleus sampling methods, enabling variation.

### The Moss Garden

Mar 2025 – Current

- Developed a UI-heavy tool with **Next.js** and **TypeScript** that enhances the ability to focus through serenity.
- Enhanced user engagement through real-time weather-driven visuals with **WeatherAPI**.
- Reduced development redundancy through custom, reusable UI components with **shadcn/ui** and **Radix UI**

### Discord Utilities Bot |

Jan 2022 – Feb 2023

- Scaled to **50+** global servers by developing **100+** unique commands with **asyncio, requests, and JSON**.
- Based on **discord.py** & used various libraries like asyncio, requests, json to produce 100+ unique commands
- Implemented and utilized **Replit DB** to store unique user information for currency and inventory.

## EXTRACURRICULAR INVOLVEMENT

### President, Head of Operations

Jul 2024 – Apr 2025

*Hack the Ridge*

*Oakville, ON*

- Expanded event participation to **172 attendees** by leading the planning and execution of Hack the Ridge 2025.
- Raised **\$7,920** in sponsorships with support from SickKids, Ontario Tech University, and Siemens by securing industry partnerships and keynote speakers.

## AWARDS

### 2025 & 2024 Euclid Math Contest Certificate of Distinction

May 2025

*Placed top 7.6% among all contestants.*

### 2025 STEM Fellowship Big Data Challenge Finalist

Feb 2025

*Published academic research paper (DOI #: 10.17975/sfj-2025-001).*

## EDUCATION

### University of Waterloo

Sep 2025 - Apr 2030

*Bachelor of Software Engineering, Honours*