

SARP DOVEN

647-807-2279 | sarptandoven@gmail.com | <https://github.com/sarptandoven> | [linkedin.com/in/sarp-tan-doven](https://www.linkedin.com/in/sarp-tan-doven)

EDUCATION

University of Waterloo

2024 - Present

Bachelor of Engineering - BAsC, Management Engineering

Waterloo, ON

TECHNICAL SKILLS

Languages: Python, JavaScript, Java, Lua, C, HTML/CSS

Frameworks: React.js, React Native, Express.js, Node.js, Flask, TensorFlow, Mocha, Chai

Developer Tools: Excel VBA, Git, AutoCAD, Godot, VS Code, Meta XR SDK, Unity

Database/Containerization Technologies: PostgreSQL, Google Cloud, Docker

EXPERIENCE

Waterloo Reality Labs

September 2024 - Present

Software Engineer

Waterloo, ON

- Developed a robust gesture recognition script in **C#** using **Meta's SDK**, enabling real-time directional gesture detection and precise identification of targeted **GameObjects**, improving the overall user interaction experience in VR environments.
- Integrated an assistant for **Universal Text VR** with voice commands and hand gestures via **Meta's Gesture API**, into **Unity**.

Evolits

June - August 2024

Software Developer

- Implemented **UI components** for Mount Gemma using **React.js** hooks and context API, styling **in-game menus**, buttons, and **HUD elements** using **Godot's control nodes**, ensuring a consistent visual theme and responsive behavior across different screen resolutions.
- Conducting **100+ integration tests** with **Mocha** on **Node.js** with **Chai Assertion** and validated API endpoints and data flow, which improved component interaction efficiency by **30% overall**.

Code Ninjas

May 2022 - May 2024

Coding and Engineering Design Instructor

Milton, ON

- Taught mathematical concepts, software development in **Java**, and **AutoCAD** development in engineering design projects with **3D printing** tooling. Instructed the facility Roblox Development class, teaching **Lua C** and Machine Learning concepts.
- Led **code review** sessions, teaching debugging techniques in JavaScript and in **Unity** game development, while grading student games and assessing code quality and game performance.

EXTRACURRICULARS

University of Waterloo Data Science

September 2024 - Present

CxC Executive

Waterloo, ON

- Organizing a datathon for **300+ participants** in a team, securing sponsorships from **4 top industry partners**, while handling event logistics, participant outreach, and crafting competition guidelines to encourage innovative data-driven solutions.

Future Business Leaders of America, Inc

September 2023 - June 2024

Chapter President

Toronto, ON

- Led business development seminars for **60+ members**, achieving a **top 10 ranking in the Canadian National Leadership Conference** and the **Largest Chapter Expansion medal**, being awarded a financial grant.
- Taught workshops to **30+ students**, leading our school into national competitions, achieving **6th from 2300 competitors** nationally.

DECA (Distributive Education Clubs of America)

September 2022 - April 2024

Chapter Director

Milton, ON

- Oversaw a chapter of **150 DECA members**, teaching public speaking and case study skills at the **national level**.

PROJECTS

Traffix | Python | ResNet-50 | EfficientNet | TensorFlow | OpenCV | Defang.io

Neural network traffic system that adjusts signal timings based on real-time traffic data

- Developed and fine-tuned a custom computer vision model using a Stanford University dataset, leveraging transfer learning from **ResNet-50** and **EfficientNet** via **TensorFlow** and a YOLOv5 model template.
- Deployed on an Arduino Uno to algorithmically control traffic using the neural network, with processing latency below 800 ms.

Amici Network | React Native | JavaScript | Python | PostgreSQL | OpenAI API

A prototype carpooling app for university commuters, partnering with McMaster University.

- Developed and implemented the app's frontend using **React Native** and **JavaScript**, creating **15+ interactive pages** for user onboarding, live ride creation, and real-time messaging, achieving a **98% success rate** in user task completion tests.
- Built a backend with **PostgreSQL**, using **20+ RESTful API endpoints** for validation/interaction tracking to support over **1,000 planned users**.

EduTailor | Python | Flask | Node.js | JavaScript | HTML | CSS | jQuery | GPT-4o-mini

Chrome extension that transforms search history into dynamic learning insights, boosting career growth.

- Built with **Python**, **Flask**, and **Node.js** to process real-time queries using **OpenAI's GPT-4o-mini** for instant summarization.
- Developed with **jQuery**, **HTML**, and **CSS** for a responsive and seamless integration with Google's search interface.