

# jennifer tsai

[jennifertsai.ca](http://jennifertsai.ca) | [jennifer.tsai@uwaterloo.ca](mailto:jennifer.tsai@uwaterloo.ca) | [linkedin.com/in/jennifertsai](https://linkedin.com/in/jennifertsai) | [github.com/jennifertsai](https://github.com/jennifertsai)

## skills

**Technologies:** C++, C#, HTML, CSS, JavaScript, Bootstrap, Git. | **Engineering:** Agile, Iterative Design, AutoCAD, 3D Printing

## experience

### Futureshot Factory | Innovator & Project Manager

July 2020 - Present

- Managed the development of four social impact projects by collaborating with Girl Up Africa, Project Vesta, Disney, and IBM to address the United Nations Sustainable Development Goals.
- Revamped company website using **Figma**, **HTML**, and **CSS** to increase engagement from external stakeholders.

### HealthTech Connex Inc. | Research Assistant

July 2019 - August 2020

- Initiated independent research project under Dr. Ryan D'Arcy to investigate the rehabilitative benefits of electrical tongue stimulation on people affected by neurological disorders, earning 'best project' out of 20 undergrad students.
- Worked with a team of six interdisciplinary researchers to scale the project into a full-fledged study. Conducted data collection, analysis, and visualizations on clinical dataset using **Microsoft Excel** and **JMP Statistics**. Ongoing study and pending publication.

### Zoom Engineering Ltd. | Student Intern

October 2018 - November 2018

- Standardized 15 architectural designs of residential & industrial buildings in preparation for the engineering pipeline.
- Drafted ventilation, lighting, and plumbing system designs using **AutoCAD** according to safety standards.

## projects

### reflect - a digitally mindful website blocker [[getreflect.app](https://getreflect.app)] [[github.com/getreflect](https://github.com/getreflect)]

November 2019 - Present

- Co-developed, designed, and marketed an AI-based website blocker that prompts distracted users to reflect on their technology usage, built using the **Agile** design process, **TypeScript**, **Figma** wireframes, and **user surveys + testing**.
- Spearheaded the development of the product website from scratch by implementing a user-centred interface design using **HTML**, **CSS**, and **JavaScript**, as well as desktop/mobile responsiveness using media queries. Led to 1.5k+ total installs and 600+ active users on Chrome/Firefox within three months of launch.

### Waterloo NeuroTech Student Design Team [[neurotechuw.com](https://neurotechuw.com)]

July 2020 - Present

- Used **Python** and **MATLAB** to apply signal processing, machine learning, and computational neuroscience methods to design human-centred neurotechnologies such as an early-detection system for Alzheimer's disease.

### pain-frEEG [[devpost.com/software/pain-freeeg](https://devpost.com/software/pain-freeeg)]

September 2020, MedHacks at John Hopkins University

- Created front-end web application prototype and wireframe designs of an EEG-based, objective pain monitoring system that allows physicians to safely administer pain-relieving drugs to patients using **Figma**, **HTML**, **CSS**, and **Bootstrap**.

### C++ Book Database

September 2019 - May 2020

- Took two **C++** courses at Simon Fraser University (Surrey, BC) in my senior year of high school, covering object-oriented programming, **data structures**, memory management, **program design and testing**, and **basic algorithms**.
- Implemented a database to store user book records with multiple menus, updating, searching and sorting features.

## leadership

### Open Source COVID-19 Medical Supplies British Columbia | Researcher & Outreach Coordinator

April 2020 - Present

- Researched effective sterilization methods to deactivate the SARS-CoV-2 virus on medical supplies and equipment.
- Established a network and database of 150+ BC manufacturers for COVID-19 technologies to be mass-produced locally.

### Canadian High Schools Model United Nations | Director of Logistics

April 2019 - April 2020

- Led the organization of this internationally renowned conference for 800+ youth to take action on global issues.
- Secured \$10k+ in sponsorships, recruited keynote speakers from the U.S. Consulate General and UNHCR, managed conference partner suppliers, and designed conference schedule and delegate social.

## education

### University of Waterloo | B.A.Sc. in Honours Biomedical Engineering

September 2020 - May 2025 (Intended)

**Relevant Courses:** Digital Computation (**C#**), Matrices & Linear Systems, Fundamental Engineering Math 1, Intro to BME Design.

**Scholarships:** Carl A. Pollock Entrance Scholarship (\$2000), President's Scholarship with Distinction (\$2000), British Columbia Excellence Scholarship (**Top 50** in Province, \$5000), Jennifer Wadge Memorial Social Justice Award (**Top 4** in District, \$2000).