

# RACHEL WEI

Toronto, Ontario, Canada

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## Education

### University of Waterloo

*Bachelor of Computer Science*

**3.82/4.0 GPA**

*Expected May 2028*

### Wilfrid Laurier University

*Bachelor of Business Administration, Double Degree Program*

**3.95/4.0 GPA**

*Expected May 2028*

## Technical Skills

**Languages:** Python, C/C++, HTML5, CSS3, JavaScript, Typescript, Racket

**Technologies/Frameworks:** React, React Native, Expo, Vite, TailwindCSS, Three.js, Node.js, Express.js, Framer, NumPy, MoviePy, Pexels API, GPT4, ElevenLabs API

**Developer Tools:** VS Code, Figma, Blender, Git, Arduino, Vercel

## Projects

**Personal Website** | *Javascript, React, CSS, HTML, THREE.js, Blender, TailwindCSS, Figma, Framer*

- Engineered a mobile-responsive React web app with THREE.js 3D interactive elements to showcase achievements
- Modeled all 3D assets from scratch in Blender**, including UV mapping, texture baking, and material design to create a visually appealing scene
- Built creative UI independently in Figma, handling both design and development
- Delivered a unique, immersive user experience to over **5000+** visitors and reaching over **170,000+** people.

**Bloomscroll** | *Typescript, Python, React Native, Node.js, Expo, MoviePy, Pexels API, GPT4, ElevenLabs API, Nativewind CSS*

- Architected an educational mobile application using **React Native and Expo**, featuring **infinite scrolling** functionality
- Implemented responsive TypeScript-based frontend with scrolling and personalized content streaming based on user learning preferences
- Integrated GPT4, ElevenLabs, and Pexels for automated generation of educational videos with synchronized voiceovers and subtitles using Python and Node.js.

## Awards

**First Place Overall** | *IgnitionHacks 2023*

- ARcademy:** *Javascript, React, TailwindCSS, HTML, C++, Arduino, GPT4, Blender, Echo3D, WebXR*
- Awarded **\$1,300 in prizes** out of **308 participants**.
- Developed an AR-based learning platform for kinesthetic learners, providing **interactive 3D** simulations and **gesture-controlled** lessons using a combination of Arduino, Mobilenet-SSD, and WebXR.
- Engineered the front-end using React, Tailwind CSS, Echo3D and integrated an AI assistant using the ChatGPT API to enhance user engagement.

**Second Place Overall** | *RythmHacks 2023*

- Proteintial:** *Python, Javascript, React, AlphaFold2, GPT4, Ethereum, Solidity, CSS, HTML, TailwindCSS*
- Developed a web app combining AI and healthcare to model 3D protein structures and securely manage patient data for researchers.
- Enabled rapid visualization of protein folding, reducing reliance on time-intensive x-ray crystallography.
- Contributed to the integration of blockchain and smart contracts for secure, access to patient data.

**Semi Finalist** | *PC Health App Live Case Competition 2024*

- Advanced to semi-finals among **1,700+ participants** in the Laurier Annual Live Case Competition, creating comprehensive marketing strategy to increase active users for George Weston Limited
- Developed professional business proposal using financial analysis and market research to provide data-driven solutions for user acquisition

**Top 25% Distinction** | *University Of Waterloo Euclid Competition 2023*

**Top 25% Distinction** | *University Of Waterloo Canadian Senior Mathematics Competition 2022*

## Work Experience

### Smiles on Sheppard Dental Office

**Nov 2022 – July 2024**

*Part Time Assistant*

*North York, ON*

- Managed ADSTRA database of **2000+ active patient records** with sensitive patient information, ensuring data accuracy and privacy compliance
- Trained staff in use of technological tools to streamline office workflows
- Supported patient interactions and clinical tasks, contributing to a positive patient experience