





AMANDA XI

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Education

University of Waterloo

Bachelor of Computer Science, 4.0 GPA

Sep 2024 – Apr 2029

Waterloo, Ontario

Technical Skills

Languages: Java, Python, JavaScript/Typescript, HTML/CSS, SQL, R, Racket

Technologies/Frameworks: React, Next.js, MySQL, PostgreSQL, Flask, Tensorflow, Sass, Bootstrap, Tailwind, Prisma

Tools: Linux, Git, Docker, Nginx, Three.js, OpenCV, Adobe Suite (Photoshop, Illustrate, Premiere Pro), Figma

Experience

Oak Ridges Heart Clinic

May 2025 – Dec 2025

Software Engineer

Oak Ridges, Ontario

- Developed and maintained a full-stack patient portal with a **Next.js** frontend, **Flask** backend, **MySQL** database, alongside a cross-platform **React Native and Expo** app, providing service across web and mobile for **1000+ users**.
- Optimized deployment pipelines by configuring **Docker** containers and deploying on **Azure VM** with **Nginx**.
- Enhanced AI-driven nutrition analysis by integrating **Tensorflow**, **OpenCV**, and segmentation models, improving portion size **estimation accuracy by 30%**, directly supporting more precise dietary recommendations.
- Implemented data-driven features including **community analytics**, **calorie tracking**, and **HL7** syncing with **OSCAR EMR**, leading to a **50% increase** in patient engagement and improvements in adherence to wellness plans.

Projects

LeCrochet | Next.js, TypeScript, Three.js, Tailwind

July 2025 – current

- Engineered **CrocheTeX**, a lightweight domain-specific language for crochet patterns, compiled live in a custom IDE-like editor with instant 2D (SVG) and 3D (**Three.js + React Three Fiber**) visualization of complex stitches.
- Created a polished frontend with **Tailwind** and **Framer Motion**, with a split-screen interface inspired by Overleaf.
- Enabled secure user login via **Google OAuth**, supporting pattern download and community sharing.
- Attracted **100+ early-access users** during development, validating demand and guiding improvements with feedback

Refyne | React, TypeScript, Flask, Python, OpenCV

Jan 2025

- Developed an **AI-powered** behavioral interview training app during UofTHacks 12 (36-hour hackathon), enabling users to receive detailed feedback on interview practice performance with a variety of common question types.
- Built a dynamic **React** frontend connected to a **Flask** backend leveraging **OpenCV** to analyze facial expressions and body language, as well as video quality factors such as lighting, focus, and background.
- Integrated **OpenAI Whisper** and **GPT-4o APIs** to transcribe and analyze user speech, providing actionable insights and personalized resume-based recommendations for improving interview skills.

Portfolio Site | React, Vite, TypeScript

Jan 2025 – current

- Designed a fully responsive personal portfolio website with interactive and intuitive **UI/UX features**
- Created interactive wireframes in **Figma**, and deployed site via **GitHub Pages**

Huffman Compression System | Java

Jan 2025

- Built a file compression program in Java using Huffman **frequency encoding** to achieve efficient data size reduction.
- Crafted custom **data structures** (binary trees, priority queues, and linked lists) to optimize encoding.

Leadership / Extracurricular

Cheese Club

Jan 2025 – Apr 2025

President

University of Waterloo

- Led a team of **6 executives** to organize and manage events for **200+ active members**, and boosted **member attendance by 20%** through strategic social media campaigns and optimized event planning

Awards / Distinctions

- Governor General's Academic Medal:** **Highest grade 11/12 average** in Richmond Hill High School class of 2024
- EIPMA Student Film Winner:** Produced, directed, and animated Vaughan Film Festival's **first place short film**
- TMU CanHack First Place School:** Completed **CTF** style challenges using **HTML** and **PostgreSQL**
- Ted Rogers Future Leaders Scholarship** Recipient
- Waterloo CEMC:** Group 5 (**Top 2%**) in Cayley 2022, **Top 25%** in Euclid 2023, CSMC 2022, CCC 2024 Sr