Yanzhen Chen

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EDUCATION

University of Toronto — Toronto, ON
Honors Bachelor of Science in Computer Science (Co-op) with Math and Statistics Minors   September 2023 - April 2027
Relevant Coursework: Data Structures and Algorithms, Databases, Neural Networks and Deep Learning, Intro to Machine Learning, Computational Linguistics, Systems Programming & Computer Organization, Software Design

EXPERIENCE

Educational Technology & UX Developer Intern — May 2025 – Present
University of Toronto Engineering Career Centre — *Toronto, ON*
- Developed digital learning platforms and UI/UX improvements for the PEY Co-op Hub, used by **5,000+** engineering PEY students, increasing content engagement by **25%** through enhanced navigation and accessibility.
- Designed and implemented a structured process for Quercus shell creation, reducing setup time by **70%** and identifying key inefficiencies in existing workflows.
- Established a reliable backup system for **10+** preparatory and co-op program shells, streamlining instructor workflows and reducing content recovery time by **90%** despite automation limitations in Canvas.
- Earned an **8-month extension** beyond the initial 4-month term in recognition of excellent performance.

Full Stack Developer — June 2025 – Present
University of Toronto Machine Intelligence Team — *Toronto, ON*
- Built responsive UI components using **React** and **Tailwind**, improving frontend usability and reducing bounce rate.
- Optimized backend APIs with caching and async handlers, reducing load time by **30%** for **500+** monthly users.
- Used **GitHub Actions** to build CI/CD pipelines for automated testing, linting, and production deployment.
- Wrote and maintained internal documentation for both frontend components and backend API usage to ensure long-term maintainability and team onboarding.

PROJECTS

Immersive AR Emergency Training System | *Python, TypeScript, Flask* | **Link** — Sept 2025
- Developed an immersive AR emergency-training prototype at **Hack the North 2025**, placing in the **Top 32 out of 200+ teams**; combined Snapchat Spectacles with Snap3D + Spatial Persistence and Vapi Voice AI for hands-free safety training simulations.
- Implemented a **Flask** backend to synchronize real-time voice instructions with dynamically generated AR objects, enabling responsive, step-by-step guidance for operating a fire extinguisher.

Resume Management Web App | *Typescript, Next.js, Tailwind, Supabase* | **Link** — May 2025
- Built a student dashboard with secure PDF resume uploads and private storage using **Supabase** Storage and Row-Level Security, with embeddable signed-URL viewers.
- Optimized performance for over 350 unique users by caching signed URLs client-side for 60 seconds and modularizing React components for easy extension.

Toronto Explorer Game | *TypeScript, Next.js, Tailwind, Firebase, Google Maps API* | **Demo** — April 2025 - May 2025
- Developed a fully responsive geolocation game using **Next.js** and Google Street View, allowing users to guess randomized real-world locations within Toronto using an interactive map interface.
- Generated and validated over **2,000+** playable Street View locations across Toronto using the Google Maps API.
- Optimized performance and minimized API costs via strategic caching and coordinate validation using Firebase.

LEADERSHIP EXPERIENCE

Vice President of External Relations — May 2024 – Present
Computer Science Student Union — *Toronto, ON*
- Raised a total of **$14,000** in sponsorships over two years by securing collaborations with **9 companies**.
- Led a team of **3 associates** to organize **8 professional development events**, including information sessions, resume review panels, and networking mixers that connected over **700** students with industry representatives.
- Hosted **2 annual career fairs** with cumulative attendance of over **800** students, connecting them with employers for recruitment opportunities.

TECHNICAL SKILLS

Languages: Python, TypeScript, Javascript, C, Java, HTML/CSS, PostgreSQL, R
Web & Mobile Frameworks: Next.js, Node.js, Express, React Native, Tailwind
Libraries & Packages: React.js, Pandas, NumPy, Matplotlib, PyTorch, Scikit-learn, Flask
Developer Tools: Git, GitHub, Linux, Shell scripting, Docker, MongoDB, Firebase, Supabase