

# Yanzhen Chen

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## EDUCATION

### University of Toronto

Toronto, ON

Honors Bachelor of Science in Computer Science with Math and Statistics Minors

September 2023 - May 2027

**Relevant Coursework:** Software Tools and Systems Programming, Intro to Machine Learning, Software Design

## TECHNICAL SKILLS

**Languages:** Python, Java, C, JavaScript, TypeScript, HTML/CSS, SQL, R

**Web & Mobile Frameworks:** Next.js, Node.js, Express, Expo, React Native, Tailwind

**Libraries & Packages:** React.js, Pandas, NumPy, Matplotlib, PyTorch, Scikit-learn, Java Swing

**Developer Tools:** MongoDB, Firebase, Supabase, Google Colab, Jupyter Notebooks

## EXPERIENCE

### Full Stack Infrastructure Developer

June 2025 – Present

University of Toronto Machine Intelligence Team

Toronto, ON

- Spearheading infrastructure development for the UTMIST website, improving load time by **30%** and enhancing responsiveness across all screen sizes for **500+** monthly users.
- Designed and implemented an observability-focused admin dashboard to streamline website monitoring and performance analysis.

### Educational Technology & UX Developer Intern

May 2025 – Present

University of Toronto Engineering Career Centre

Toronto, ON

- Developing digital learning platforms and UX improvements for the PEY Co-op Hub, increasing student 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.

## PROJECTS

### Resume Management Web App | Next.js, Typescript, 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 | Next.js, TypeScript, Tailwind, Firebase, Google Maps Api | [Link](#)

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 Firestore and the Google Maps API.
- Designed modular architecture to support rapid expansion to other cities with minimal code duplication.
- Optimized performance and minimized API costs via strategic caching and coordinate validation using Firebase Firestore.

### Gyroscopic Phone Authenticator | Next.js, React Native, Expo, Tailwind, Firebase | [Link](#)

January 2025

- Pioneered a cross-platform authentication flow using a gyroscope-based phone tilt mechanism.
- Bridged a **Next.js** web interface with a **React Native** mobile app using real-time data transmission via Firebase.

## LEADERSHIP EXPERIENCE

### Vice President of External Relations

May 2024 – Present

Computer Science Student Union

Toronto, ON

- Secured **\$9,000** in sponsorships by establishing and collaborations with **four** companies.
- Enhanced professional development opportunities and increased union event attendance by **30%** through organizing an information session and a resume review panel, each attended by over **50** students.
- Organized a career fair featuring **four** companies with **300** student attendees, facilitating valuable networking and recruitment opportunities.