

# Yanzhen Chen

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## EDUCATION

### University of Toronto

Honors Bachelor of Science in Computer Science (Co-op) CS GPA: 3.81

September 2023 – April 2027

Toronto, ON

**Relevant Coursework:** Data Structures and Algorithms, Advanced Algorithms, Operating Systems, Databases, Neural Networks and Deep Learning, Machine Learning Engineering, Artificial Intelligence, Web Programming, Software Design

**Teaching Assistant — CSC165:** Mathematical Expression and Reasoning for Computer Science (Winter 2026)

## EXPERIENCE

### Software Engineer

*IQBank*

Jan 2026 – Present

Toronto, ON

- Developing and maintaining production-grade frontend features for an exam preparation platform under the supervision of **Prof. Jack Sun**, using **React** to support question banks, practice flows, and discussions.
- Implementing data-driven UI flows by integrating **REST APIs** for question delivery, submissions, discussions, and study analytics, with robust handling of asynchronous state, loading, and error conditions.
- Contributing to frontend architecture decisions including component abstraction, state management patterns, and reusable UI primitives, enabling rapid iteration while maintaining long-term code quality and scalability.

### Educational Technology & UX Developer

*University of Toronto Engineering Career Centre*

May 2025 – Present

Toronto, ON

- Developed digital learning platforms and UI/UX improvements using **HTML** for the PEY Co-op Hub, used by **5,000+** engineering PEY students, increasing content engagement by **25%** through enhanced navigation.
- 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.

### Software Engineer

*University of Toronto Machine Intelligence Team*

June 2025 – Present

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.

## PROJECTS

### Toronto Explorer Game | *TypeScript, Next.js, Tailwind, Firebase, Google Maps API* | [Demo](#) April 2025 – Oct 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.
- Developed **RESTful API** endpoints that fetched and validated randomized Street View data from the Google Maps API, generating over **2,000+** playable Toronto locations.

### Immersive AR Emergency Training System | *Python, TypeScript, Flask* | [Link](#) Sept 2025

- Developed an immersive AR safety training prototype at **Hack the North 2025**, placing in the **Top 32 out of 250+ teams**; combined Snapchat Spectacles with Snap3D, Spatial Persistence, and Vapi Voice AI for hands-free training.
- 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.

## LEADERSHIP EXPERIENCE

### Vice President of External Relations

*Computer Science Student Union*

May 2024 – Present

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 **1700** students with industry representatives.

## TECHNICAL SKILLS

**Languages:** Python, TypeScript, Javascript, C, Java, HTML/CSS, PostgreSQL, MySQL, R, Assembly

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

**Libraries & Packages:** Pandas, NumPy, Matplotlib, PyTorch, Scikit-learn, Flask

**Developer Tools:** Git, GitHub, Linux, Shell Scripting, Docker, MongoDB, Firebase, Supabase