Yanzhen Chen

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EDUCATION

University of Toronto

Toronto, ON

HBSc. Mathematics Major and Statistics Major, Computer Science Minor

September 2023 - May 2027

Relevant Coursework: Software Tools and Systems Programming, Software Design, Theory of Computation, Intro to Computer Science, Intro to Statistical Reasoning and Data Science

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, Google Colab, Jupyter, SAS Studio, Markdown

EXPERIENCE

Educational Technology & UX Developer

May 2025 - Present

University of Toronto, Faculty of Applied Science, Engineering Career Centre

Toronto, ON

• Appointed to a hybrid Educational Technology and UX Assistant role to develop skills in digital learning platforms, UX improvement, and data-driven content design.

PROJECTS

Toronto Guessing Game | Next.js, TypeScript, Tailwind, Firebase, Google Maps Api | Link ☑ April 2025

- Developed a fully responsive web game using Next.js and Google Street View, allowing players to guess locations within downtown Toronto.
- Implemented randomized, validated Street View coordinates using Firestore caching and the Google Maps API, optimizing API usage and performance.
- Engineered a scoring algorithm based on geographic distance and created intuitive UI/UX components for real-time game feedback and results tracking.

Computer Science Student Union Website | Next.js, Typescript, Tailwind | Link &

April 2025

- Independently rebuilt the CSSU website and resolved long-standing Netlify deployment issues, enabling updates after over a year of downtime.
- \bullet Improved image loading speed by 40% and modularized components to simplify future extensions such as the events list and about page.

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.
- Enhanced security and user experience through intuitive device interactions and dynamic visual cues with **Tailwind**.

Movie Review Platform | Java, JavaSwing | Link 🗹

November 2024 - December 2024

- Implemented a scalable movie review system for **50+** user accounts with three of my peers, enabling seamless review creation and retrieval through **MongoDB** storage.
- Enhanced user experience by integrating The Movie Database API for title and poster retrieval.
- Streamlined backend operations, improving our original data access speed by 20% through efficient Java and API integration.

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 Google, Dayforce, Manulife and SOTI.
- Enhanced professional development opportunities and increased union event attendance by 30% through organizing an information session with Manulife and a resume review panel with Dayforce, each attended by over 50 students.
- Successfully organized a career fair featuring four companies with 300 student attendees, facilitating valuable networking and recruitment opportunities.