

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 Intern

May 2025 – Present

University of Toronto, 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

Indoor/Outdoor Image Classifier | *Pytorch, Flask, Matplotlib, scikit-learn* | [Link](#)

May 2025

- Built a binary image classifier using a custom **CNN architecture** trained on folder-structured datasets.
- Achieved **85% validation accuracy**, demonstrating strong generalization to unseen data.
- Created a responsive **Flask app** with image preview and training/validation plots.
- Separated training and inference logic, enabling predictions using saved **.pth** model weights.

Canada 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 identify real-world locations using **Google Street View** and an interactive map interface.
- Designed the app with modular city-specific configurations, enabling quick deployment to new locations such as Toronto and Calgary with minimal code duplication.
- Implemented randomized, validated Street View coordinates using Firestore caching and the Google Maps API, optimizing API usage and performance.
- Developed a dynamic scoring algorithm based on geospatial distance and integrated real-time feedback UI to enhance user engagement.

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.
- 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**.

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.