Yanzhen Chen

(825)-747-1417 | career@yanzhenchen.ca | linkedin.com/in/yanzhenchen | github.com/YheChen | yanzhenchen.ca/

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

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.
- 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**.
- Ensured full compatibility across both **iOS** and **Android** by adapting gyroscope input handling and UI responsiveness for each platform.

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.

Player Profile Analyzer | *Next.js, React.js, Typescript, Tailwind* | **Link** May 2024 - November 2024
- **Analyzed performance metrics for 150,000,000+ players** by integrating the Riot Games API, improving data accessibility for end-users.
- **Boosted app security** by implementing a Nodemon proxy server, ensuring API key confidentiality and minimizing exposure risks.

LEADERSHIP EXPERIENCE

Vice President of External Relations May 2024 – April 2026
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.