Zikora Chinedu

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EDUCATION

University of Toronto

Sep. 2023 – Jun. 2027

Honours BSc. in Computer Science, Minor in Mathematics and Statistics | GPA: 3.71/4.0

EXPERIENCE

Software Engineering Intern

May. 2025 – Aug. 2025

Ontario Public Service

Toronto, ON

- Developed a collaboration platform for OPS employees with anonymous posting, AI-enhanced content improvement, and integrated project management tools.
- Architected responsive **React TypeScript** components with **Tailwind CSS**, improving platform usability through intuitive dashboard design and real-time notifications that enhanced user task completion efficiency.
- Streamlined administrative operations by creating comprehensive super admin interface using **Express.js** REST APIs with **PostgreSQL/Drizzle** ORM, reducing manual oversight time by **50**%.

Founding Engineer

Jan. 2025 - Sep. 2025

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Toronto, ON

- Led frontend development of financial e-learning platform, delivering comprehensive notification system, multi-role authentication, and responsive course management interface serving both students and teachers.
- Engineered authentication system using **NextAuth.js** with **JWT** sessions and **bcrypt** encryption, supporting role-based access control for students, teachers, and administrators across multiple schools.
- Engineered real-time notification system with conditional rendering and state management, reducing page load times by 25% and improving user engagement.

PROJECTS

- LocateAble (UofTHacks 12) | React, PostgreSQL, Gemini API, Google Maps API, Python, Supabase, Flask
 - Engineered full-stack accessibility rating platform integrating **Google Maps** and **Gemini APIs**, enabling crowdsourced location accessibility data with normalized **PostgreSQL** database design.
 - Integrated location-based services using the **Google Maps API** for visualization and the **Gemini API** to fetch query-relevant locations.
 - Designed and implemented a **PostgreSQL** database with normalized schemas to efficiently store user ratings and location data, enabling fast and reliable data retrieval.
 - Used Supabase for user authentication and Flask to create a RESTful API for the backend.
- Lumen (Terrahacks 2025 Winner) | React, Vite, Gemini API, Typescript, MongoDB, Unity, Framer Motion
 - Developed Lumen, a mental wellness companion app that analyzes user emotions via Gemini AI and provides therapeutic mini-games for personalized emotional support and trend tracking.
 - Architected backend API services using Node.js and TypeScript with MongoDB for emotion data collection, user analytics, and clinical reporting with comprehensive error handling.
 - Implemented Unity WebGL game integration with React using react-unity-webgl for the mini-games.
- Trading Simulator | Python, Pandas, Matplotlib, Scikit-learn, NumPy, React, Node.js, MongoDB, Python, Flask
 - Built full-stack stock trading simulator with ML prediction engine enabling users to test custom models against real-time market data.
 - Implemented multi-algorithm ML pipeline with LSTM/RNN, Random Forest, XGBoost, and Q-Learning agents for 1-5 day stock price forecasting.
 - Developed asynchronous Flask API with MongoDB integration and dynamic model loading supporting TensorFlow and scikit-learn formats.

TECHNICAL SKILLS

Languages: Python, HTML/CSS, Java, C, C++, Assembly, JavaScript, Typescript, SQL, Bash

ML/AI Frameworks: PyTorch, TensorFlow, Transformers, Scikit-learn, spaCY, Pandas, NumPy, Matplotlib, Seaborn

Web Frameworks & Libraries: React, Node.js, Flask, Express.js

Developer Tools: Agile, Git, PostgreSQL, MongoDB, Jupyter Notebook