ZIKORA CHINEDU

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EDUCATION

University of Toronto   Sep. 2023 – Jun. 2027
Honours BSc. in Computer Science, Minor in Mathematics and Statistics
- Relevant Coursework: Operating Systems, Systems Programming, Data Structures & Algorithms, Computer Organization, Software Design

EXPERIENCE

Software Engineering Intern   May. 2025 – Aug. 2025
Ontario Public Service   *Toronto, ON*
- Built a secure full-stack collaboration platform for OPS employees using React, Express.js, and PostgreSQL.
- Utilized JWT authentication, bcrypt encryption, and role-based access control for secure data handling.
- Optimized frontend performance with React, achieving a **93% Lighthouse score** and **sub-2s load times**.
- Integrated OpenAI API for content enhancement, idea generation, and navigation chatbot, reducing time from idea to implementation.
- Created admin interface with Express.js and PostgreSQL, **reducing manual oversight by 50%**.

Founding Engineer   Jan. 2025 – Sep. 2025
Wealthseed (Startup)   *Toronto, ON*
- Used multi-tenant PostgreSQL schema and subdomain routing to support multiple schools on the platform.
- Designed schema to support distinct student and teacher access levels with granular permissions.
- Built real-time notification system with Firebase Functions and Firestore for announcements and messages.
- **Improved page load times by 25%** through centralized AWS S3 asset storage and SVG optimization.

PROJECTS

ext2 File System API | *C, Operating Systems*   Nov. 2025
- Created thread-safe file system API in C for concurrent mkdir, cp, rm, and linking operations on ext2 disks.
- Used locks and mutexes to protect file system metadata and prevent race conditions and deadlocks.
- Managed ext2 structures including inode allocation, block pointers, and directory entry creation/deletion.

Lumen (Terrahacks 2025 Winner) | *React, Vite, Typescript, MongoDB, Unity, Framer Motion*   Aug. 2025
- **Won Best Use of MongoDB Atlas** building a mental wellness app with Unity WebGL game integration.
- Utilized Node.js and TypesScript with MongoDB for emotion data collection and user analytics.
- Achieved seamless browser-based gameplay with Unity WebGL games in React using react-unity-webgl.

Trading Simulator Web App | *React, Node.js, MongoDB, Python, Flask*   Jan. 2025 - Apr. 2025
- Led a team of 3 people to build a full-stack stock price simulator.
- Utilized ensemble ML pipeline (LSTM/RNN, RF, XGBoost, and Q-learning) for 1–5 day stock forecasts.
- Built an ML pipeline with LSTM/RNN, RF, XGBoost, and Q-learning for 1–5 day stock forecasts.
- Built an async Flask API with MongoDB and dynamic model loading for TensorFlow and scikit-learn.

LocateAble (UofTHacks 12) | *React, PostgreSQL, Python, Supabase, Flask*   Jan. 2025
- Engineered a full-stack accessibility rating platform integrating Google Maps and Gemini APIs.
- Enabled crowdsourced location accessibility data using a normalized PostgreSQL database design.
- Built a Flask REST API with Supabase auth for concurrent submissions and rating aggregation.

TECHNICAL SKILLS

Languages: C, C++, Python, JavaScript, Typescript, HTML/CSS, SQL, Java
ML/AI Frameworks: PyTorch, TensorFlow, Scikit-learn, spaCY, Pandas, NumPy, Matplotlib, Seaborn
Web Frameworks & Libraries: React, Node.js, Flask, Express.js, Vite
Developer Tools: Git, PostgreSQL, MongoDB, Jupyter Notebook