

Kurtis Lin

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EDUCATION

University of Waterloo

Bachelor of Applied Science in Management Engineering

Sep 2024 - Apr 2029

Waterloo, ON

EXPERIENCE

Software Developer

Airfairness

May 2025 – Aug 2025

Toronto, ON

- Engineered a data pipeline by implementing **Redis caching** for high-frequency queries and **NeonDB** for user data storage and API responses, reducing dependency costs from external APIs and increasing response times by **40%**
- Created a Streamlit-based monitoring dashboard to visualize system health metrics and detect performance **choke points**, leveraging real-time data analysis to help with debugging and optimize system reliability
- Architected the codebase, by designing component interactions with **Upstash** and **Neon** to enable auto-scaling, and leveraging **FastAPI for asynchronous** execution. Powered all by python, for its scalability with AI

Software Engineer

Second Saviour

Aug 2025 – Present

Vancouver, BC

- Collaborated with leadership to implement technical website optimizations that improved retention, by **24%**
- Developed and integrated responsive, mobile-friendly payment interfaces with **Stripe**, improving sales
- Improved website **SEO** to achieve first-page Google rankings, increasing visibility and higher organic traffic

Web Developer

A&B Daycare

Jan 2024 – Sep 2024

Vancouver, BC

- Deployed modern, responsive websites using **Next.js**, **React** and **Vercel**, enhancing company visibility by **32%**
- Optimized **website structure**, and **page load times**, improving search engine rankings and increasing traffic
- Collaborated with businesses to craft websites embodying their unique culture and aspirational online presence

PROJECTS

Urban Sentinel - Detecting Decay for Cities | Python, FastAPI, PostgreSQL, LightGBM, React

- Developed a real-time urban monitoring platform that integrates geospatial analytics to track urban decay
- Collaborated with a team to build a backend using modern technology, processing up to **100+** live data streams
- Achieved **2nd** place out of 45+ competing teams by delivering an innovative prototype and compelling pitch

Scam-Mah - Scammer Respondent | Python, Scikit-learn, ElevenLabs', Gemini AI, IsolationForest, Fast API, Pandas

- Developed a model with **StandardScaler** and **IsolationForest** for anomaly detection across **100+** samples
- Integrated **Google's Gemini AI** and **ElevenLabs'** TTS API's to generate real-time, natural-sounding response
- Collaborated with a team to secure **3rd** place overall at a 24-hour hackathon competing against **300+** competitors

NanoWorks - DNA Origami Builder | Python, Nextjs, Pollinations.AI

- Developed an innovative algorithm to build and visualize complex DNA structures through image representation
- Showcased a MVP through compelling presentations, **demonstrating product features** and value to judges
- Developed a frontend that integrates with the backend algorithm, assuring **smooth system functionality**

MedGem - Early Symptom Detector | Python, React Native, Gemini, Vercel, Cohere, Nextjs

- Implemented data scraping on secondary sources to **generate insights** that allow physicians to make hypotheses
- Collaborated with a team on a multi-component project, ensuring **effective communication** at every stage
- Developed a user-friendly interface for nurses and physicians, enabling seamless integration and workflows

TECHNICAL SKILLS

Languages: Python, SQL, Pandas, Matlab, JavaScript, Excel

Frameworks & Libraries: MySQL, PyTorch, Scikit-Learn, TensorFlow, TextBlob

Developer Tools: AWS, Vercel, Jupyter Notebook, Anaconda, Pycharm