

# Kurtis Lin

jh7lin@uwaterloo.ca | 778-823-2628 | linkedin.com/kurtis-lin | github.com/Kurtis24

## EXPERIENCE

### Software Developer

May 2025 – Aug 2025

*Airfairness*

*Toronto, ON*

- Engineered AI analytics platform using **FastAPI, PostgreSQL/NeonDB, Redis, Alembic, and Docker**, processing **1,000+** flight disruption records to automate claim validation
- Built regulatory-compliant scoring engine for **EU261, APPR, and US261** frameworks, standardizing claim classification across international markets.
- Implemented Redis caching, improving system performance by **41%** and cutting response times from **11s** to **0.4s**
- Developed gradient boosting ML model, cutting processing load times by **28%** and enabling real-time analytics

### Software Engineer

Aug 2025 – Present

*Second Savour*

*Waterloo, ON*

- Architected Spring Boot package-tracking system serving **20+** active users, reducing customer complaint by **31%**
- Deployed Supabase OAuth authentication with **99.9%** uptime since launch, securing data for **200+** users
- Optimized the existing codebase, improving system performance and maintainability across multiple releases

### Software Engineer

Jan 2024 – Sep 2024

*A&B Daycare*

*Vancouver, BC*

- Deployed modern, responsive websites using **Next.js, React** and **Vercel**, enhancing company visibility by **32%**
- Enhanced user accessibility by implementing **WCAG 2.1** standards, improving site usability score from **68** to **91**
- 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*

- Achieved **2nd place** out of 300+ competing teams by delivering an innovative prototype and compelling pitch
- 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

### SLiM - Language Model Personalizer | *Python, React, Typescript, Tailwind, Ngrok, Supabase*

- Engineered SLiM (Smart LLM Router + Incremental Model Trainer), an agentic AI framework that reduces latency and cloud compute costs by auto-promoting repeated queries into lightweight specialized models.
- Designed a smart routing layer using embeddings + cosine similarity to delegate tasks between large LM's
- implemented **CUDA** integration, enabling users with NVIDIA GPUs to leverage the latest CUDA features for faster computation and improved performance

### 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**

## TECHNICAL SKILLS

**Languages:** Python, JavaScript, Typescript, SQL, Pandas,

**Frameworks & Libraries:** MySQL, NeonDB, Scikit-Learn, TensorFlow, SpringBoot, Redis, React, Vite

**Developer Tools:** AWS, Vercel, Jupyter Notebook, Anaconda, Docker, Maven, git

## EDUCATION

### University of Waterloo

Sep 2024 - Apr 2029

*Bachelor of Applied Science in Management Engineering*

*Waterloo, ON*