

LARRIS XIE

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EDUCATION

University of Waterloo

Bachelor's of Computer Science

Nortel Institute Scholarship and President's Scholarship Recipient (\$6000)

Sep 2024 - May 2028

4.0/4.0 GPA

EXPERIENCE

Meta x MLH

Production Engineer Fellow

Jun 2025 - Sep 2025

- Deployed and managed **production-grade infrastructure** on a CentOS VPS for a Flask and MySQL application with **Docker**, an NGINX reverse proxy, and DNS management.
- Configured system monitoring and alerting with **Prometheus**, **cAdvisor**, and **Grafana**, improving bug detection speed in production by **80%**.
- Automated **CI/CD workflows** with GitHub Actions, integrating tests, linter checks, and performance monitoring to streamline deployments and improve system reliability.

Shopify

Software Engineer

May 2025 - Aug 2025

- Designed and implemented scalable **data models and GraphQL APIs** in Ruby on Rails, powering a fully extensible cash management experience for **2M+ active retailers**.
- Engineered full-stack features for Shopify Point of Sale (POS) in **React Native and Typescript**, resolving critical race conditions in async workflows to reduce failure rate by **40%**.
- Built a **graph memory** system with Neo4j and Graphiti to retrieve facts from millions of prior conversations with **Shopify's AI agent**, achieving accurate recall in **93%** of queries referencing past conversations.

University of Waterloo

Research Assistant — Security and Privacy in ML with Dr. Florian Kerschbaum

Jan 2025 - Apr 2025

- Constructed a protocol for **vertical federated learning** in PyTorch to securely align and train on distributed credit card time-series sequences.
- Fine-tuned **transformer models** from Research on Tabular Deep Learning and optimized hyperparameters with Optuna, achieving a **95% F1 Score** despite a **10000:1** class imbalance.

Jobeyze

Software Engineer

Dec 2024 - Mar 2025

- Spearheaded the development of an **automated web scraper** using Selenium and PHP Laravel, extracting **1200+ job postings daily** and eliminating manual collection entirely.
- Built a **RESTful API** with a structured **MySQL** schema, enabling real-time syncing of postings and application links across platforms used by thousands of active users daily.

PROJECTS

LifeOS (Hack the 6ix Winner) [↗](#) | React, FastAPI, Redis, Docker, Qdrant, Supabase, AWS

- Engineered a **distributed video processing pipeline** using Redis Queue that orchestrates semantic analysis with TwelveLabs, embedding generation, and cloud storage via **asynchronous workers**.
- Deployed a **containerized API service with Docker**, FastAPI, Pydantic models, and JWT middleware; supported modular features like authentication, video ingestion, memory search, and chat.

On The Dot (2000+ users) [↗](#) | React, Supabase, PostgreSQL, Python, GCP

- Launched a trivia game with persistent game state and anonymous user tracking—**8000+ plays in 3 months**.
- Architected a Supabase backend with custom **PostgreSQL** functions to achieve **20ms read/write latency** on **30K queries** for real-time statistics tracking and rate control.

Published Machine Learning Research Paper [↗](#) | Python, XGBoost, Pandas, NumPy

- Analyzed a financial transaction dataset using Python and trained an **XGBoost model** to classify fraudulent organizations with **99.9315% accuracy** and a **0.001% false positive rate**.
- Published a peer-reviewed research paper in the **Journal of High School Science** under the supervision of Dr. Maria Konte.

SKILLS

Languages: Python, Java, JavaScript, TypeScript, C, C++, C#, Ruby, SQL, R, Go
Frameworks: React, NextJS, ExpressJS, NodeJS, FastAPI, Flask, Rails, PyTorch, TensorFlow
Databases: MongoDB/NoSQL, SQLite, MySQL, PostgreSQL, Redis
DevOps: Linux, Docker, Git, GCP, AWS, GitHub Actions, Grafana, NGINX