

Fei Lin

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Education

University of Waterloo

Bachelors of Software Engineering, GPA: 89% (3.9/4.0)

Waterloo, Ontario

2020 - 2025

Skills

Languages

C++, Python, Go, SQL, Scala, Java

Technologies

Git, Docker, Kubernetes, Spark/Hadoop, Airflow, Grafana, MongoDB, Express, React, Node

Work Experience

Index Exchange

Toronto, Ontario

Software Engineer Co-op

Current

- Currently working on the transactions team to support and process the financial data needs of a digital advertising exchange platform that handles **billions of requests every day**
- Added new dimension to core **Spark** job, resulting in the addition and localization of approximately **10 million records a day** to key data table
- Modified filtering logic of a key ETL pipeline using **Scala** to ingest an additional **25 000 records a day**

Wish

Toronto, Ontario

Data Scientist Intern

Jan 2022 - Apr 2022

- Completed analysis, data engineering, and general data science tasks to drive data driven decisions on an e-commerce platform with **hundreds of millions** of monthly users and products
- Built **Airflow** data pipelines in **Python** to create and fill integral database tables with **millions of records** using **Spark**, **Presto**, and **Hive** to query and aggregate big data
- Designed, developed, and tested automated reporting task for key business metrics in **Python**, **SQL**, and **Airflow**, reducing the manual workload for dozens of core business teams

Exempt Edge

Calgary, Alberta

Software Developer

May 2021 - Aug 2022

- Full-stack software development on **LAMP (Linux, Apache, MySQL, PHP)** stack with the **Laravel** framework to create software solutions for the private capital markets of Canada
- Designed, implemented, and integrated a new referral system in **PHP** using **Laravel** to replace and expand upon the previous method used by over **90,000 transactions** in the system
- Refactored and optimized **SQL** queries in combination with utilizing hash tables to reduce end user latency by **2.5x** for high traffic pages

Projects

Yum

JavaScript, MongoDB, Express.js, React, Node.js

- **3rd Place winner of the Cisco Webex Virtual Hackathon**
- Full stack web application built with **MongoDB**, **Express**, **React**, and **Node.js** that aimed to be a food sharing platform to facilitate the donation and receipt of food from donors to recipients
- Developed **REST API's** in **Node.js** to handle essential CRUD operations

CryptoPi

Python, JavaScript

- A hardware wallet and companion web/mobile app that allowed users to transfer percentages of real ethereum **cryptocurrency** with just a tap
- Facial authentication using **OpenCV** and **Azure's Face API** to improve transaction security

Question Answering AI

Python

- Built question answering bot using **Natural Language Processing** and a **334M parameter BERT based model**, fine tuned for task with **PyTorch**
- Wrapped bot in a **flask** web application where users can enter a passage followed by a question, and have the AI give an answer