

# Fei Lin

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## Skills

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### Languages

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

### Technologies

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

## Work Experience

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### Software Engineer

Toronto, Ontario

#### Index Exchange

Sep 2022 - Dec 2022

- Worked on the transactions team to support and process the financial data needs of a programmatic advertising platform that handles **billions** of requests every day
- Used **Go** to improve sampling methods of key microservices, resulting in major improvements to data collection and metrics from **millions** of auctions every day
- Expanded the dimensions and filtering logic of multiple data pipelines with **Scala**, **Spark**, and **SQL** to allow for the ingestion of more than **25,000** database records and the localization of **10 million** database records every day

### Data Scientist

Toronto, Ontario

#### Wish

Jan 2022 - Apr 2022

- Completed analysis, data engineering, and modeling 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 an automated reporting job for key business metrics using **Python**, **SQL**, and **Airflow**, reducing the manual workload for dozens of core business teams

### Software Developer

Calgary, Alberta

#### Exempt Edge

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

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### 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**
- Developed **REST API's** in **Node.js** to handle essential CRUD operations

### CryptoPi

#### Python, JavaScript

- A hardware wallet and companion web app that allowed users to transfer real **cryptocurrency** with just a tap
- Added 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 the 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

## Education

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### University of Waterloo

Waterloo, Ontario

**Bachelors of Software Engineering, 3.9 GPA**

2020 - 2025