

Mary Xu

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SOFTWARE SKILLS

Programming languages: Python, Java, C, React, JavaScript, CSS, HTML, SQL

Libraries/Frameworks: React, React Native, Express.js

Tools: Git, Docker, Kafka, Kubernetes, Ansible, Prometheus, Grafana, Telegraf

EDUCATION

Honours Bachelors of Science

University of Toronto, Toronto, ON

September 2018 – Present

Program: Software Engineering Specialist & Statistics Minor (GPA: 3.79/4.0)

Relevant Coursework: Algorithm Design, Analysis of Data Structures, Database Systems, Advanced Software Design

Expected Graduation Date: April 2023

PROFESSIONAL EXPERIENCE

Software Engineer Co-op

Index Exchange, Toronto, ON

May 2020 – August 2020

- Configured **Telegraf** on servers using **Ansible** playbook to extract system metrics which were used to develop a traffic limiter that was implemented across ~5000 servers and resulted in a 100% reduction in server failures
- Designed early-warning monitoring and alerting system using **Prometheus** to draw conclusions by identifying key metrics such as CPU and automatically notifies the on-call engineers
- Developed dashboards with **Grafana** to assess the difference in server performance after applying a traffic limiter and created meaningful alert messages

Software Developer Co-op

CIBC Live Lab, Toronto, ON

November 2019 – April 2020

- Developed and tested pilot NFC feature using **Java** which allows mobile clients to perform E-transfers up to 10x faster
- Designed IOS extension features on the current CIBC banking app using **Swift** and **Objective-C** to enhance the user experience for millions of clients
- Implemented features in the internal pilot Android app to book meeting rooms in collaboration with senior software developers
- Collaborated with Software Developers to pair-program and apply the test-driven development methodology

Technical Process Analyst Co-op

CIBC, Toronto, ON

September 2019 – April 2020

- Developed different **classification** algorithms to make decisions in choosing variables that affect the use of a CIBC credit card with up to 78% accuracy
- Extracted and filtered customer data using **Python** for purposes of analysis, modeling, and reporting

PROJECTS & EXTRACURRICULARS

BookIt Web App

React / Node.js / Express.js / MongoDB

- A deployed web application (bookitapp.me) that helps connect nearby readers and provides a user-friendly interface they can use to share their books and borrow from others in their community
- Implemented special features such as live chat using WebSocket, search feature using Elasticsearch, and book recommendations using a neural network built by TensorFlow.js.

e-Learning Platform

React Native / Node.js / Express.js / MongoDB

- A website like Google Classroom but is improved to enable organic and guided interactions within the user community
- Developed 10+ pages and screens using React functional components with hooks

“Zoomer” Ride-share

Java / PostgreSQL / MongoDB / Neo4j

- A web application that allows you to request rides - matching you with drivers nearby to take you to your destination
- Implemented the microservices architecture, consisting of three microservices with an accompanying API Gateway, which are all containerized by Docker