

TIANYI ZHANG

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WORKING EXPERIENCE

Backend Developer Intern

IBM Canada - Db2 on Cloud

May 2019 - Present Markham, Ontario, Canada

- Built, tested and delivered an automated orchestration pipeline for provisioning production Db2 on cloud **High Availability** instances on AWS with **Ansible**
- Developed the Db2 interface of a **gRPC** microservice for dynamic dispatching and provisioning customer database instances in **Kubernetes** clusters with **Go**
- Revamped tools to analyze Db2 application snapshots, achieving **concurrent processing** and reduced processing time from **3 mins** to **2 secs** using **Go**
- Delivered a web-based tool for Db2 diagnostic logs analysis using **Python, Nginx, and Docker**, automating **3** workloads and significantly enhanced productivity for the team

Teaching Assistant

Department of Computing and Software, McMaster University

Sep 2018 - May 2019 Hamilton, Ontario, Canada

- Led weekly tutorials and provided academic assistance to **100+** students in two core CS courses: Intro to Computational Thinking (**Haskell**), Intro to Programming (**Python**)
- Significantly improved making efficiency by automating weekly grading tasks for the D2L system using **Selenium web automation** and **data scraping**

Full Stack Developer Intern

Royal Bank of Canada

May 2018 - Sep 2018 Toronto, Ontario, Canada

- Developed an AI-powered business intelligence system for advisors to better engage with clients using **Python Flask** and **Angular**
- Integrated **business data** from various sources and generated daily industry reports by automating the workflow of **5** different tasks
- Designed and implemented scalable **MS SQL** database model and multiple **REST API** endpoints
- Implemented caching layer to decrease network calls and improved runtime performance by **40%**

SKILLS

Flask Node.js HTML CSS Angular React
RestAPI gRPC SQL MongoDB Agile Development
Docker Kubernetes Helm AWS Git Linux Ansible

PROGRAMMING LANGUAGES

Python, Go ●●●●●
Javascript ●●●●●
Java, Bash ●●●●●

EDUCATION

B.A.Sc Computer Science Co-op

McMaster University

- Expected graduation date: **Apr 2022**
- Cumulative GPA 3.9 / 4.0

PROJECTS

GateKeeper

- A **full-stack** whitelist management system for Minecraft servers based on **React, Redis, Go, MongoDB and RabbitMQ**
- Fully **dockerized** with simple-to-use deployment pipeline for **Kubernetes** cluster via **Helm Chart**
- Improved go implementation for **Source RCON Protocol** and built the RabbitMQ **channel recovery** mechanism for enhanced reliability

Talky (NWHacks 2018)

1st popular vote out of 144 teams Best Use of Microsoft Technology

- An IOS app that provides real-time feedback on users' public speech
- Analyzed properties of audio files using **Python** and integrated the app with **Flask backend**
- Helped design a chat-like interface with **Swift**

SafeBnB (Hack the North 2018)

- A web app that recommends Airbnb listings in Toronto based on how safe the area is
- Analyzed crimes and Airbnb datasets in **Python** to derive algorithms for calculating safety index
- Rapid prototyping with **Angular** and **Firebase**

CERTIFICATIONS

- AWS Certified Solutions Architect - Associate

EXTRACURRICULAR

The Forge (Innovation Factory)

- Member of Hamilton's **startup incubator**
- Joined a startup business which received tremendous guidance and mentorship