Tianyi Zhang

 (647) 936-2123 | tiaven1104@gmail.com | tywinzhang.com | tywin1104 | in tywinzhang

Education

McMaster University *Hamilton, Ontario, Canada*
B.A.Sc Computer Science Co-op *Sep 2017*
- Cumulative GPA: **3.9/4.0**
- Expected graduation date: **Apr 2022**

Experience

IBM Canada - Db2 on Cloud *Markham, Ontario, Canada*
Software Developer Intern *May 2019 - Aug 2020*
- Lead developer of control plane components for a controller-based cloud-native platform running fully-managed High Availability Db2 services on Kubernetes
- Implemented billing microservice with Golang, Kubernetes Operators and PostgreSQL to calculate and submit real-time customer high-watermark database usages at scale
- Consolidated backend Golang gRPC API service with Protobuf, delivered business-critical features of self-serve DB maintenance and remote restore
- Revamped Open Service Broker API implementation with Ruby on Rails, integrating Db2 service with IBM Cloud service catalog and IAM
- Built an automated orchestration pipeline for provisioning EC2 instances running High Availability Db2 workloads on AWS with Ansible

Royal Bank of Canada *Toronto, Ontario, Canada*
Full Stack Developer Intern *May 2018 - Sep 2018*
- Developed an AI-powered business insight platform for commercial account managers using Python Flask, Angular and Microsoft SQL Server
- Integrated business data from various sources and generated daily industry reports by automating the workflow of 5 different tasks
- Implemented client-side-caching using Angular HTTP Interceptor to reduce web app latency by 40%

McMaster University *Hamilton, Ontario, Canada*
Teaching Assistant *Sep 2018 – May 2019*
- 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 marking efficiency by automating weekly grading tasks for the D2L platform using Selenium web automation and data scraping

Projects

GateKeeper *github.com/tywin1104/mc-gatekeeper*
- A full-stack player management system for Minecraft servers based on React, Redis, Golang, MongoDB, and RabbitMQ
- Automated system deployment with Docker Compose. Also built Helm Charts for deployment on Kubernetes clusters
- Improved Go binding of Source RCON Protocol and devised a RabbitMQ channel recovery mechanism for enhanced reliability

AutoReddit *autoreddit.me*
- An automation tool for online marketing on Reddit built with Django, PostgreSQL, AWS SQS, and Docker
- Utilized Oauth2 to authorize with Reddit server and task queue system based on Celery
- Deployed on AWS using Terraform and Ansible for infrastructure automation and configuration management

Talky - NWHacks *devpost.com/software/talky*
1st popular vote out of 144 teams | Best Use of Microsoft Technology
- An IOS app that provides real-time feedback on users' public speeches
- Analyzed audios with Python and integrated the app with Flask backend and Firebase datastore
- Designed message-based UI with Swift

Skills

Languages Golang, Python, Javascript, Java, Bash
Technologies Django, Flask, React, RestAPI, gRPC, AWS, SQL, MongoDB, RabbitMQ, Docker, Kubernetes, Jenkins, Helm, Git, Ansible

CERTIFICATIONS

AWS Certified Solutions Architect - Associate