Delmar Zhao

delmar.zhao1@gmail.com delmarzhao.me linkedin.com/in/delmarzhao github.com/delmarzhao

Skills

Languages: Python, Ruby, C, Java, Bash, Javascript, HTML, CSS
Tools and Frameworks: Git, SQL, Android Studio, Node, Express, Ruby on Rails, Linux, CUDA

Education

University of Toronto Toronto, Ontario
Bachelor of Science, Computer Science *GPA: 3.94* Sep 2017 - Nov 2021

Experience

Momentive (formerly SurveyMonkey) Ottawa, ON
Software Engineer 2021

- Improved observability of Rails application by implementing Sentry logging, enabling automatic forwarding of log data to Splunk Cloud, and configuring automated Slack and PagerDuty alerts based on log events

Software Engineering Intern 2020

- Developed features for administrative interface using **Ruby on Rails** and **HAML** to automate and expedite common customer support requests, fulfilling the top five feature requests from the customer success team
- Implemented **cron** jobs to automatically delete data for GDPR compliance using **Sidekiq** workers
- Optimized **ActiveRecord** ORM and **PostgreSQL** queries, improving runtime complexity.
- Used **RSpec** to write unit and integration tests, achieving over 95% code coverage on new features.

Fortran Traffic Systems Limited Toronto, ON
Full Stack Developer Intern 2019

- Led development of cross-platform mobile app using **Dart** and **Flutter** to display live map navigation and real-time traffic signal phase and timing information to users, delivering the MVP within two months
- Implemented email and Google account based user authentication using Google **Firebase**, and allowed administrators to create priority accounts with additional privileges for transit and emergency vehicles
- Created **REST API** endpoints with **Nodejs** and **Express** for serving intersection geometry, signal phase, and timing information based on GPS protocol buffer stream
- Optimized REST API responses using gzip encoding, reducing mobile app data usage by 88% per nearby intersection

Projects

Parallel Particle Simulation 2020

- Optimized serial algorithm for n-body particle simulation in **C++**, improving time complexity from n^2 to n.
- Parallelized serial algorithm to run on multiple processors using both **OpenMP** and **MPI** to achieve linear speedup.

Sign Language Interpreter 2018

- Implemented sign language interpreter using **Python**, **Flask**, and the IBM Watson Machine Learning API
- Won 1st place at Hack the North 2018 for best use of the IBM Watson Machine Learning API

GameCentre 2018

- Designed mobile game hub with **Java** and **XML** using the **MVC** design pattern, to allow users to compare scores with others
- Built several mobile games for the hub in **Android Studio**, and used **JUnit** to automate testing for controller classes

Awards

Koch Scholarship
Fred and Mary Koch Foundation 2018 - 2020
Awarded annually based on outstanding GPA, extracurricular activities, community service, and character