Ian Lai

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Education

University of Waterloo
4A - Bachelor of Computer Science, Economics Minor

Skills

Programming
❋ C++
❋ C#
❋ C
❋ Python 3
❋ Typescript
❋ Angular
❋ NodeJS
❋ HTML5 / CSS3 / ES6
❋ BASH
❋ Java
❋ SQL

Development Tools
❋ Mercurial
❋ Git
❋ IntelliJ Idea
❋ Sublime Text
❋ Vim
❋ Linux
❋ Docker

Interests

Dragonboat

Taekwondo

Musicals

Chess

Trombone

Piano

Employment

Google, Software Developer Intern   January 2020 to Present
❋ Contributed to an internal tool that correlates events to changes in production metrics
❋ Changed architecture to be streaming based to avoid being blocked by slow dependencies
❋ Developed in C++ and Angular
❋ Closely collaborated with multiple points of contact to maintain project velocity

D2L, Software Developer Intern   September 2019 to December 2019
❋ Worked with C#, Polymer 3, and SQL on a SIS Integrations platform
❋ Implemented a telemetry service to aggregate and monitor usage metrics
❋ Collected telemetry data per job and sent results to S3 to be queried by Amazon Athena
❋ Investigated and resolved several legacy issues

Amazon, SDE Intern   May 2019 to August 2019
❋ Worked with Java on the Payment Products team
❋ Created a templating tool to replace legacy architecture by using AWS to host workflow orchestration services
❋ Shortened initial infrastructure creation time from weeks to hours
❋ Projected yearly infrastructure cost savings of over 90%

Visier, Software Developer Co-op   September 2017 to April 2018
❋ Added the ability for an admin user to upload their company's logo and display it throughout the application
❋ Implemented a toggleable high contrast mode to aid with visibility on projectors
❋ Rigorously wrote unit tests with Jasmine for components and services created
❋ Gained extensive experience with Mercurial, Angular, RxJS, and NodeJS

Humber Institute of Technology, Math Learning Support   January 2017 to April 2017
❋ Supported students with their Math and Computer Programming courses
❋ Created a web application to organize and provide auditory reminders of class visits
❋ Conducted an internal analysis on the Math Centre's attendance and return rates
❋ Assisted in the migration of the Headstart program from an outdated platform to D2L

Projects

UWaterloo People Counter   2018
❋ A service to estimate the number of people in each building on campus using UWaterloo public API based on the assumption that each person has a device connected to that building's wireless access point
❋ Frontend written in Angular and hosted on Github Pages
❋ Backend written in Python, using Psycopg2 to interact with a PostgreSQL database on Heroku

Not Cards Against Humanity   2018
❋ An in browser, mobile friendly Cards Against Humanity clone
❋ Created with Angular and NodeJS, hosted on Heroku
❋ Leverages Socket.io to support multiple concurrent games through joinable room codes

OS/161 Kernel   2018
❋ A small toy kernel built in C, developed on top of Harvard's OS/161 for the MIPS architecture
❋ Implemented crucial kernel components such as synchronization primitives, system calls, support for multiple processes, TLBs, and page tables
❋ Learned about low level programming and computer architecture, as well as contributing to existing systems