

Ian Lai

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Education

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

Skills

Programming

- * C++
- * C
- * Python 3
- * Typescript
- * Angular 7
- * NodeJS
- * HTML5 / CSS3 / ES6
- * BASH
- * Java
- * SQL

Development Tools

- * Mercurial
- * Git
- * IntelliJ Idea
- * Sublime Text
- * Vi
- * Linux
- * Jasmine

Interests

🏹 Dragonboat

🥋 Taekwondo

🎵 Musicals

♟ Chess

🎺 Trombone

🎹 Piano

Employment

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

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, and was exposed to Docker and Scala

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- * Assisted in the migration of the Headstart program from an outdated platform to D2L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 online, mobile friendly Cards Against Humanity clone created with Angular and NodeJS, hosted on Heroku
- * Supported multiple concurrent games through joinable room codes

OS/161 Kernel

2018

- * A small toy kernel built in C, implementing crucial kernel components such as synchronization primitives, system calls, support for multiple processes, TLBs, and page tables
- * Developed on top of Harvard's OS/161 for the MIPS architecture

Juggle

2017

- * A clone of the Facebook Messenger soccer juggling game, applying a physics engine implemented in Javascript, featuring a game speed slider to modify difficulty
- * Leveraged CSS to minimize Javascript usage and achieve a smooth playing experience

Quadris

2016

- * A turn based Tetris command line game created with C++, featuring customizable block shapes, multiple levels, and an expandable playing field as game options