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

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- Assisted in the migration of the Headstart program from an outdated platform to D2L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, backend written in Python, using Flask to connect to the UWaterloo API and Psycopg2 to interact with a PostgreSQL database

Not Cards Against Humanity — 2018
- An online, mobile friendly Cards Against Humanity clone created with Angular and NodeJS
- Supported multiple concurrent games through joinable room codes
- Hosted on Heroku

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

GraphHax — 2017
- An in browser graph visualization tool, accessible through a toolbox interface
- Built using Javascript, Canvas, and JQuery

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