Ian Lai

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Education

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

Skills

Programming
* HTML5 / CSS3
* Javascript ES6
* Typescript
* Angular 7
* NodeJS
* C++
* C
* Python 3
* BASH
* SQL

Development Tools
* Mercurial
* Git
* IntelliJ Idea
* Sublime Text
* Vi
* Linux

Interests


Dragonboat


Taekwondo


Musicals


Chess


Trombone


Piano

Employment

Visier, Software Developer — September 2017 to April 2018
* Developed methods to take information and present it in a meaningful manner
* 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
* Assisted with a complete visual overhaul of the entire application for HR Tech 2017
* 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* Assisted in the migration of the Headstart program from an outdated platform to D2L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
* Used UWaterloo public API to estimate the number of people in each building on campus
* 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 Cards Against Humanity clone created with Angular and NodeJS
* Supported running multiple games simultaneously with an arbitrary amount of players
* Featured intuitive controls optimized for mobile play
* Hosted on Heroku

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

Juggle — 2017
* Implemented a basic physics engine to emulate the Facebook Messenger soccer juggling game
* Leveraged CSS to minimize Javascript usage and achieve a smooth playing experience
* Featured a game speed slider to modify difficulty

GraphHax — 2017
* An in-browser graph visualization tool
* Developed a toolbox interface to access manipulation functions
* Built using Canvas, Javascript, and JQuery

Quadris — 2016
* A Tetris command line based game created with C++
* Featured customizable block shapes, multiple levels, and an expandable playing field as game options