

Owen Qian

SOFTWARE DEVELOPER · NATIONAL CHESS MASTER

☎ (647) 383-8340 | ✉ oyqian@edu.uwaterloo.ca | 🌐 OwenQian

Skills

Languages

Proficient: Javascript, Java, C++, Ruby | **Familiar:** Python, SQL, C, CSS

Libraries and Frameworks

React, Redux, Alt, Rails, Angular, Node, three.js/WebGL

Tools

Git, PostgreSQL, UNIX/MacOS, JIRA, Selenium, Jenkins, Valgrind, vim, make, Qt

Experience

Think Research Corporation - Fullstack Engineering Intern

Toronto, Ontario

Think is a SaaS company offering healthcare services on a cloud-based platform

Jan - Apr 2017

- Designed and implemented common **authorization layer** to support transition to a **microservice platform**
- Optimized **React/Rails** app performance by caching document images, cutting out repetitive server requests
- Created **RESTful endpoints**, and modified **Angular modules** to consume DocuSign e-signature API data
- Realized UI mocks by creating **extensible React components** that integrated smoothly into existing architecture
- Added feature to sanitize user input in real-time, preventing the typing of illegal characters using **jQuery**

CV Diagnostix - Software Engineering Intern

Ottawa, Ontario

CVD is a startup developing audio processing tools to diagnose heart disease

May - Aug 2016

- Created sample **filtering algorithm** to reject noisy audio samples, that matched human filtering results **90%** of the time
- Replaced outdated signal processing functions with **C++ implementations**, improving program runtime by **30%**
- Streamlined software development lifecycle by setting up a **continuous integration** workflow with **Jenkins**

Projects

Phil Ivy

C++ Project

Monte Carlo Tree Search Poker AI

Jul - Sept 2016

- Created a **practical poker AI** using a simulation tree-search to make sensible betting decisions in C++
- Optimized tree search to run over **7 million simulations** every decision without feeling unresponsive
- Designed a heuristics algorithm in order to **balance exploration vs exploitation** in tree search decisions
- Extensively utilized the **C++ STL**, especially smart pointers to achieve leak-free memory management despite millions of node allocations

Live Free (from diabetes)

PennApps XIII Winner

Diabetes Glucose Level Predictor

Jan 2016

- Created **neural network classifier** to predict future blood sugar levels with **91% accuracy** in **Python**
- Awarded **most useful application** of provided data sets by PennApps sponsors

White Cross

Javascript Project

Interactive 3D Rubik's Cube

Mar 2017

- Allows user to solve a **3D Rubik's Cube** and finds the fastest solution, built using **three.js/WebGL** and **Javascript**

Education

University of Waterloo —2B Term

Waterloo, Ontario

Expected B.ASc in Computer Engineering (ECE)

2015 - 2020 (expected)

- Data Structures and Algorithm (ECE 250)
- Operating Systems and Systems Programming (ECE 254)

University Chess Champion

Queen's University

Canadian University Chess Championships

Jan 2016

- Led underdog Waterloo team to an upset **2nd place** finish
- Ranked in **top 100** of all Ontario chess players