Owen Qian

SOFTWARE DEVELOPER · CHESS NATIONAL MASTER

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Skills

Languages	Javascript, C++, Java, Ruby, Python, SQL, C, CSS
Libraries and Frameworks	CUDA, React, Redux, Alt, Rails, Angular, Node, three.js, WebGL
Tools	Git, PostgreSQL, Jenkins, JIRA, Selenium, Valgrind, Qt

Experience

Think Research Corporation - Software Engineering Intern
Toronto, Ontario
SaaS company building a cloud-based platform for healthcare system
Jan - Apr 2017

- Architected a common **authorization layer** to help break up a monolithic app into to a microservices platform
- Improved **React/Rails** app performance with image caching, reducing server requests from **10+ to 1** per page load
- Added the ability to sign documents digitally in internal **Angular** app, setting up multiple **RESTful** endpoints
- Created **extensible React components** that were reused in multiple frontend views
- Used **jQuery** to sanitize user inputs in real-time, dynamically restricting the size of text fields to prevent overflow

CV Diagnostix - Software Engineering Intern
Ottawa, Ontario
Startup developing audio processing tools to diagnose heart disease
May - Aug 2016

- Upgraded legacy codebase to **C++ implementations**, improving runtime by **15%**
- 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 poker AI that uses a simulation tree-search to make sensible betting decisions
- Optimized tree search algorithm, increasing number of simulations during a 5 second think from **3 to 7 million**
- Designed a heuristics algorithm to **balance exploration vs exploitation** in tree search decisions
- Extensively leveraged the **C++ STL**

Live Free
PennApps XIII Winner
Diabetes Glucose Level Predictor
Jan 2016

- Created **neural network classifier** to predict future blood sugar levels with **91% accuracy** in **Python**
- Voted as the **most useful application** by PennApps sponsors

Resistro
Electronic Resistance Calculator
Mar 2017

- A web app that allows users to quickly calculate resistivity; built using **React and Javascript**

Education and Achievements

University of Waterloo —2B Term
Waterloo, Ontario
Expected Bachelor's in Computer Science (Dec 2020)
2015 - 2020 (expected)

- Object-Oriented Software Developement (CS246)
- Data Structures and Algorithm (ECE 250)
- Operating Systems (ECE 254)
- Advanced Probability (STAT 240)

University Chess Champion
Queen's University
Canadian University Chess Championships
Jan 2016

- Led Waterloo team to an upset **2nd place** finish from initial last place seeding out of 12 teams
- Ranked in **top 100** of all Ontario chess players