

# Owen Qian

SOFTWARE DEVELOPER · NATIONAL CHESS MASTER · AI ENTHUSIAST · DEEP THINKER

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## Overview

**Languages** C++, Java, Python, HTML5, CSS3, Javascript, Matlab

**Development Tools** Valgrind, Jenkins, git, JIRA, Bash, vi/vim, Google test, gdb/lldb debugger, Cygwin, Qt Creator, Makefiles, qmake

## Experience

### CV (Cardiovascular) Diagnostix

Kanata, Ottawa

SOFTWARE ENGINEERING INTERN

May - Aug 2016

- Re-implemented Fortran Fourier transform functions with C++ implementations, maintaining consistent interface and performance
- Streamlined workflow by replacing mind-numbing manual tests with robust automatic processes, run on a nightly basis using Jenkins
- Created C++ instrumentation toolkit to numerically compare and dump floating point values in hexadecimal format
- Worked in small peer-reviewed development team, collaborating using BitBucket and JIRA
- Set-up local python Wiki server to document test cases and set-up procedures

## Projects

### Pooker (not a typo)

Side Project

NO LIMIT HOLD'EM POKER AI

Jul - Sept 2016

- Developed continuously using git with **over 150 commits**. Visit my GitHub!
- Created "intelligence" using Monte Carlo tree search with Upper Confidence Bound selection strategy
- Judiciously managed dynamic memory alloc with **0 memory leaks** with over 500,000 allocs (checked with Valgrind)
- Studied multiple PhD dissertations and articles and reproduced their results without reading any source code

### Live Free

PennApps XIII

MACHINE LEARNING GLUCOSE LEVEL PREDICTOR FOR DIABETES

Jan 2016

- Predicted blood sugar levels with **91% accuracy** with neural network classifier
- Optimized performance by employing stochastic, random-batch gradient descent

## Achievements

### Waterloo's First Board (Chess)

Queen's University

CANADIAN UNIVERSITY CHESS CHAMPIONSHIPS

Jan 2016

- Awarded **best individual performance** in entire tournament
- Critical contributor to Waterloo team's 2nd place finish
- Ranked in **top 100** of all active Canadian chess players

### Top 0.5% of all players in HearthStone

BLIZZARD'S POPULAR COLLECTIBLE CARD GAME

Jun 2015

- Ranked higher than over 10 million players worldwide
- Wrote in-depth deck guide that reached over 100,000 views on HearthPwn

## Education

### University of Waterloo —Second year

Waterloo, Ontario

EXPECTED B.ASC IN COMPUTER ENGINEERING (ECE)

2015 - 2020 (expected)

- ECE 250 Data Structures and Algorithms
- ECE 222 Digital Computing

**2360 SAT Score** 800 Math, 800 Reading, 760 Writing