

Owen Qian

SOFTWARE DEVELOPER · NATIONAL CHESS MASTER · AI ENTHUSIAST

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Skills

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, Makefile, qmake

Experience

CV (Cardiovascular) Diagnostix

Kanata, Ottawa

SOFTWARE ENGINEERING INTERN

May - Aug 2016

- Improved performance of outdated Fourier transform functions by wrapping and integrating C++ library, while maintaining consistent interface
- 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**
- Streamlined workflow by replacing mind-numbing manual tests with robust automatic processes, run on a nightly basis using **Jenkins** and Google test
- Set-up local python Wiki server to document test cases and set-up procedures

Projects

Pooker: A Not So Shitty Poker AI

Side Project

NO LIMIT TEXAS HOLD'EM

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
- Strong focus on modular and object-oriented design to allow for painless tuning of AI decision processes
- 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

Robot Racing Design Team

University of Waterloo

OPENCV AND MATLAB IMAGE PROCESSING

Mar 2016

- Isolated traffic light colors and distinguished roadlines using hsv filters and color channel manipulation
- Used Matlab to prototype and test algorithm before porting to OpenCV

Achievements

Waterloo's First Board (Chess)

Queen's University

CANADIAN UNIVERSITY CHESS CHAMPIONSHIPS

Jan 2016

- Ranked in **top 100** of all Ontario chess players
- Awarded **best individual performance** in entire tournament
- Brought Waterloo team from last seed to 2nd place finish

Education

University of Waterloo —Second year

Waterloo, Ontario

EXPECTED B.A.Sc IN COMPUTER ENGINEERING (ECE)

2015 - 2020 (expected)

- ECE 250 Data Structures and Algorithms
- ECE 222 Digital Computing - Using Assembly to interface with hardware

2360 SAT Score 800 Math, 800 Reading, 760 Writing