Owen Qian

Contact

+1 (647) 383-8340
oyqian@uwaterloo.ca
http://owenqian.me
github.com/OwenQian

Languages

C++
Java
Python
MATLAB
Fortran
JavaScript
HTML5 / CSS
Batch Scripting

Relevant Tools

Qt Creator
Bash
Vi / Vim
NetBeans
Eclipse
MinGW
JIRA
Git
SVN
Unit testing
Google Test
Cygwin
Make / qmake
Valgrind
GDB debugger
MATLAB / Octave
MoinMoin
Jenkins automation
Object Oriented Design
Agile workflow

Interests

Chess
Machine Learning

Summary

- Software developer in C++ and Java flirting with machine learning and AI
- Strong practical coding foundation from designing and implementing conceptually and syntactically difficult OOP projects from the ground up including a Monte Carlo Poker AI in C++
- Familiarity with software lifecycle including experience with debugging, automated unit-testing and peer-reviewed version control

Experience

May - Aug 2016 — **Software Engineering Intern** — CV Diagnostix
Agile C++ Development using Qt

- Improved detection rate of heart disease using neural network classifier
- Increased project portability and efficiency by replacing outdated Fortran libraries with C++ implementations
- Enabled command line project building with automatic versioning using batch scripts, qmake and Qt project files
- Set-up internal Wiki server and documented project progress and test cases on JIRA as part of Agile workflow

Projects

Current — **Pooker—C++** — GitHub repo
Not so shitty No Limit Hold'em Poker AI

- Evaluates EV of different actions(child nodes) using Monte Carlo search, balancing explore/exploit with Upper Confidence Bound algorithm
- Optimized MCTS effectiveness by biasing simulation towards likely actions based on opponent model
- Designed multi-class C++ project from ground up using OOP concepts such as abstract classes, virtual functions and multiple inheritances
- Adherence to C++11 best practices with use of STL classes such as smart pointers and vectors over raw pointers and arrays

Jan 2016 — **Live Free** — PennApps XIII
Diabetes Glucose Level Predictor

- Predicted blood sugar levels with **91% accuracy!** with Neural Network
- Optimized performance by employing stochastic, random-batch gradient descent

Achievements

Jan 2016 — **Best Predictive Algorithm** — PennApps XIII
Live Free—91% accurate neural network glucose classifier

Jan 2016 — **National Chess Master** — Canadian University Chess Championships
Waterloo's first board, awarded best individual performer, and critical contributor to Waterloo's overall 2nd place finish

Education

2015–2020 — **B.ASc** Candidate in Computer Engineering — University of Waterloo

Mar 2016 — Stanford Machine Learning — Coursera

Jan 2015 — 2360 SAT Score: 800 Math, 800 Writing, 760 Reading — College Board