

# Shaun Ren

<https://shaunren.me>

<https://github.com/shaunren> | [shaun@shaunren.me](mailto:shaun@shaunren.me)

## SKILLS

### PROGRAMMING

Proficient:

C • C++ • Java • Python

Familiar:

MATLAB • SciPy • Sage  
CSS • JavaScript • HTML • C#  
LaTeX • Lua • Lisp • SQL • Bash  
Assembly • Haskell • Android

### SYSTEMS

Linux • FreeBSD • Windows • OS X

### EDITORS

Emacs • Vim • Visual Studio • Eclipse

### SOURCE CONTROL

Git • SVN • Perforce

### LANGUAGES

Native:

English • Mandarin Chinese

Intermediate:

Japanese • Latin

## CERTIFICATIONS

### .NET FRAMEWORK - APPLICATION DEVELOPMENT FOUNDATION

Dec 2010 | Microsoft

## INTERESTS

Quantum computing • QFT  
Neuroscience • Number theory  
Guitar • Calligraphy • Linguistics  
Reading • Biking

## EDUCATION

### UNIVERSITY OF WATERLOO

CANDIDATE FOR BACHELOR OF COMPUTER SCIENCE

MINOR IN PHYSICS

Sept 2014 - Present | Waterloo, ON

## RESEARCH INTERESTS

- Pattern recognition, prediction and feedback using computational neuroscience models
- Quantum computing, theory and implementation
- Quantum key exchange protocols
- Quantum neural networks, and its applications

## WORK EXPERIENCE

### SONY NETWORK ENTERTAINMENT | C++ DEVELOPER

May 2015 - Aug 2015 | Waterloo, ON

- Worked on the DLNA backend of Media Go
- Implemented an on-the-fly MP3 transcoder with LAME
- Wrote a DLNA certification automation server using Microsoft Casablanca
- Added DLNA support for all removable media
- Gained familiarity with Win32 API and COM interface

## PROJECTS

- An UNIX-like monolithic kernel for i686 in C++14
- A parallel ray tracer in Haskell
- An Android arcade shooter game using accelerometer as input
- A first-order logic engine in Haskell
- A convolutional neural network in C++ for handwritten OCR
- Ported OpenTuring from Windows to GNU/Linux

## AWARDS

|      |                                    |   |
|------|------------------------------------|---|
| 2014 | 5 <sup>th</sup> /1190 in Canada    | Canadian Computing Competition Silver                       |
| 2014 | 38 <sup>th</sup> /641 in Canada    | Google Code Jam Round 2 (handle: <a href="#">shaunren</a> ) |
| 2014 | 347 <sup>th</sup> /13852 in Canada | Euclid Mathematics Competition                              |
| 2013 | 1 <sup>st</sup> in Ontario         | ECOO Competition Winning Team                               |