

# Joey Pereira

## software developer

### contact

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joeypereira.com  
github.com/xlegoz

### languages experienced with:

Java  
Racket  
C  
HaXe  
Actionscript

### working knowledge:

Javascript  
Python  
PHP  
Erlang  
Bash

### tools

Git  
L<sup>A</sup>T<sub>E</sub>X  
MySQL

### reverse engineering tools

Java Bytecode Editor  
Java Decompiler  
.NET Reflector  
Ollydbg

### interests

distributed systems  
reverse engineering  
operating systems  
machine learning  
formal languages  
compilers and  
assemblers

innovating & inventing  
theoretical physics  
fishing and sailing  
entrepreneurship  
new tech

## about me

I'm currently an undergraduate Computer Science student at the University of Waterloo. I have a passion for theoretical computer science, software development, and the innovation along with creation of new ideas.

## qualifications

avid leader  
experienced with small teams  
enjoys challenging problems  
passion for learning  
adaptable to any environment  
loves computer science

## projects

- |           |   |                        |
|-----------|---|------------------------|
| 2014      | <b>Pi Net</b> - Raspberry Pi Mesh Based Network   | Still in development   |
|           | Intentions to discover the network interaction of multiple devices over a mesh topology network and the sustainability of an intranet with all nodes  |                        |
| 2013-2014 | <b>JoOS</b> - Bare Bones Operating System - <i>NASM, C</i>  | github.com/xlegoz/JoOS |
|           | Goal of learning more about the operating system layer and theory<br>Involved i386 instruction set, operation at a low level and interrupt handling   |                        |
| 2013-2014 | <b>Coldeas</b> - Collaborative Classroom Space - <i>Java</i>  | Still in research      |
|           | Involved finding solutions to problems such as:<br>Designing a server structure to handle state updates and conflict management<br>Utilizing data structures requiring delta compression and spatial representation |                        |
| 2013      | <b>jjNES</b> - Nintendo Entertainment System Emulator - <i>Java</i>   | Still in research      |
|           | Aimed to achieve a better understanding of computer architecture<br>Observed models of how components interact within the NES architecture<br>Involved an understanding of machine code, processor operations       |                        |

## experience

- |            |  |                   |
|------------|--|-------------------|
| 06-08 2013 | <b>Framing Carpenter</b>   | Katerberg Framing |
|            | Involved in small <i>team collaboration</i> to achieve <i>tight deadlines</i><br>Worked with various tools of the trade to <i>optimally complete tasks</i>   |                   |
| 2012-2013  | <b>Co-founder and Head Technician</b>  | J&J Tech          |
|            | Investigated starting a <i>small business</i> with a partner<br>Gained <i>management skills</i> through advertising and customer handling<br>Underwent management and organizational <i>responsibilities</i>                                   |                   |
| 06-08 2012 | <b>Service Assistant</b>   | PlanetCPU         |
|            | Diagnosed software and hardware problems under <i>tight time constraints</i><br>Worked as a <i>team to complete tasks</i> , as well as run a market campaign<br>Learned how to be a <i>key contributor</i> to a small team and to the business |                   |

### Volunteering

- |           |   |  |
|-----------|---|--|
| 2013-2014 | <b>Recruitment Ambassador</b>   | David Cheriton School of Computer Science, uWaterloo |
|           | Volunteered in University of Waterloo events for prospective students<br>Set up <i>technical equipment</i> for the event<br>Help prospective students in <i>discovering computer science</i> as a passion |  |
| 2012-2013 | <b>Technical Organizer</b>  | Elora Road Christian Fellowship                      |
|           | Solved various <i>technical problems under pressure</i> to maintain event quality<br><i>Facilitated</i> a small worship team and the operation of equipment   |  |

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## education

- 2013-2018 **Bachelor's of Computer Science, University of Waterloo** Waterloo, Canada  
Projected minor in management studies based on interests of entrepreneurship  
First year representative on Math Endowment Fund Funding Council  
Cumulative average of 85%
- 07-09 2013 **Startup Engineering Course** Stanford - Coursera (Online)  
Learned about what it takes to develop an idea from a business perspective  
Introduced to node.js and using PaaS
- 01-02 2014 **Web Development Course** Udacity (Online)  
Built applications on Google App Engine using Python
- 01-02 2014 **Ontario Secondary School Diploma** Centre Wellington District High School  
Involved in school community, having led several clubs teaching peers knowledge outside of curriculum and creating initiatives to learn with collaboration

## achievements

- 09 2013 **Google Ship Wars Hackathon *Top 10*** Google, Waterloo  
Developed an AI script which challenged fellow competitors  
Acquainted with new tools and an API under a heavy time constraint
- 02 2013 **Educational Computing Organization of Ontario Programming Contest *Semi-finalist***  
University of Western Ontario  
Directed a team in a highly team-oriented problem solving environment  
Utilized critical thinking to translate solutions to code
- 04 2013 **Canadian Computing Contest Certificate of Distinction *Top 100*** University of Waterloo  
Created efficient algorithms to problems by unconventional thinking
- 06 2013 **Mathematical Merit Award** Centre Wellington District High School
- 06 2013 **Ontario Scholar Award** Centre Wellington District High School

## relevant activities

### reverse engineering:

Driven from a passion to understand the workings of software and what drives a security focus in the development cycle, as well as to discover code structure post-compiling  
Knowledge of obfuscation and encryption methods for retaining integrity  
Experience decompiling and analyzing programs, in particular malicious software