# JEFFREY LIU

#### **FDUCATION**

## Computer Engineering, University of Toronto | Toronto, ON

2014 - Current

- CGPA: 3.49
- Dean's Honour List

## SKILLS

## **Programming Languages**

• C++, C, HTML, CSS, JavaScript, XML, Java, Verilog, Assembly, PHP, Python

## Version Control Software

• Git, SVN

## Software Applications

• Linux Terminal, MATLAB, AutoCAD, Android Studio, Visual Studio, Microsoft Office

## **PROJECTS**

## Google Maps Project

- Multithreaded with C++ the team's Dijkstra algorithm to increase program speed by 14 percent.
- Organized unstructured OSM (Open Street Map) info to different data structures for efficient access.
- Modified the EasyGL framework with DirectX to eliminate screen flickering through the use of double buffering.
- Coded unit tests to ensure that the data parsed led to accurate relationships between streets and speed limits.
- Placed 14<sup>th</sup> out of 116 teams in algorithm speed and quality of resulted path.

# Personal Website

- Applied JQuery to dynamically update articles between clicks instantaneously.
- Utilized bootstrap to design a user interface that would allow users to visualize projects and articles in one layout.

## Pokémon Battle Simulator

- Wrote a data path in Verilog to simulate Pokémon battles and to draw the animations on the VGA.
- Incorporated a control path to take in user input from a De1-SOC board.

## **INTERESTS**

## Mobile Application Development

- Experienced with Google APIs to retrieve location data and implement location based auto-completion.
- Created UIs that required less clicks to navigate through.

### Information Technology

- Wrote a bash script to monitor the CPU and memory usage of computer clusters.
- Used the Linux Terminal to mount computer nodes to increase the speed of simulations by 30 percent.

#### WORK EXPERIENCE

#### Royal Building Products | Seasonal

Summer 2015

- Efficiently processed pipes using electrical tools before the set deadlines.
- Shelved inventory, moved pipe, and assembled orders for customers.

#### Kumon Learning Centre | Tutor

Summer 2014

- Effectively explained Math and Reading material which reduced explanation time by 10 percent.
- Assisted 20 percent more students compared to my peers by finding the student's gap in understanding.