Steve Weng

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3A Comp Sci/Software Eng Option • ID: 20474930

Work Experience

Ericsson Inc. **(Remote) Plano, Tx (Summer 2015)**

Lead Developer - Intelligent RAN Upgrade (Intern Project)

- Designed and implemented an algorithm in C++ that decreased coverage loss during Radio Access Network software upgrades by ~42% while maintaining previously maximized efficiency.
- Worked with team to create parsers in Python to extract network tower information from raw data.
- Created a tool to calculate efficiency of new algorithm to compare with other candidate solutions.
- Collaborated with marketing team and achieved continuation of project by full-time employees.

Ericsson Canada Inc. **Ottawa, ON (Winter, Summer 2015)**

Software Developer Co-op - PDU Wi-fi, AP6335 Strandmount Project

- Developed in C, implemented a configuration tool for the basic wifi drivers of new access point product, allowing engineers to easily debug features and make code changes.
- Created new automation framework to allow designers to test their code at their own leisure, also saving the automation team hours of work everyday.
- Wrote sanity and regression tests in Python for daily testing of new and legacy products.

Centre for Extended Learning - uWaterloo **Waterloo, ON (Fall 2013)**

Digital Media Production - Mathematics Division

- Added user accessibility feature that read math content/equations out loud to help persons with disability engage in online lectures.
- Designed content for second year linear algebra course using digital media software and Javascript.

Projects (www.github.com/s4weng)

At War - Fantasy Beat 'Em Up Game **C++, SFML (Multimedia Library)**

- Designed a pseudo-3D gameplay by implementing Z-ordering on textures.
- Implemented logical system using suitable game development concepts; scene graph (game entity management), state stack (navigation using finite-state machine), and GUI interfaces (menus).
- Created sounds in a 3D space by positioning a listener on a 3D axis with consideration to attenuation and minimum distance.
- Developed client-server architecture by writing and using custom protocol over TCP/IP to support networking/online multiplayer.

GTR2 Autonomous Driver **Matlab, Java Robot API**

- Trained an artificial neural network to drive around a racetrack in racing simulator GTR 2.
- Parsed image of the road ahead (unrolled pixel values) along with the speedometer (achieved with separate neural network for OCR) as input data.
- Used feedforward (with randomly initialized parameters) and back-propagation to calculate optimal parameters for hypothesis.
- Recorded screen of human driving around the racetrack to gather training data.

TotalGains **AngularJS, Ionic Framework**

- Hybrid app that identifies a weightlifter's weakness given user input and provides an optimal rep/set scheme using Prilepin's chart based on that weakness.

Skills

- Proficient in C++; familiar with C, Python, Javascript, and Golang.
- Experienced with Unix/Ubuntu and Git/SVN.

Education

University of Waterloo **Sept 2012 - Dec 2017**

Honours Bachelor of Computer Science (Software Engineering Option) *Waterloo, ON*