Sebastian Imlay

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208.290.4936

Experience

Software Engineer - Full Stack — **Knotis Inc.**
April 2014 - October 2015

- Implemented backend features with Django and Cassandra.
- Implemented frontend features in JavaScript and HTML with Apache Cordova (aka phonegap).
- Worked with a team to build and maintain a web and mobile stack.
- Setup and deployed Nagios Alert system.
- Setup small Jenkins build bot cluster to test with Docker.
- Managed Apache, uWSGI, and Nginx configurations.

Software Engineer Intern — **Yelp**
Summer 2013

- Worked with a team to import and export features to and from the Yelp database.
- Ran analysis on data using Python Streams and MapReduce.
- Received Hackathon "Most Useful Award".

Software Engineer Intern — **Synapse Product Development**
Winter 2013

- Implemented recognition for accelerometer time series data on the Nike FuelBand
- Algorithms include FFT, Decision Trees and K Nearest Neighbor.
- Co-inventor on "Gesture Recognition" patent.

Research Assistant — **NASA JPL**
Summer 2012

- Researched and applied Machine Learning to estimate tree heights across North America.
- Algorithms include Decision Tree Learning, Random Forests and Linear Regression.
- Built and tested tools to analyze hundreds of gigabytes of atmospheric data.

Software Engineer/Research Intern — **Tamarack Aerospace Group**
Summer 2011

- Researched load cycle counting algorithms for fatigue analysis calculations on small aircrafts.
- Data processing techniques involved Fast Fourier Transform and Band Pass Filters
- Responsible for implementing and testing algorithms efficiently and correctly.

Software Engineer Intern — **NASA Goddard Space Flight Center**
January - August 2010

- Researched Laser Altimetry techniques for Space Flight and Autonomous Robots.
- Implemented an A* like search algorithm for robot path planning to allow robots to autonomously navigate any environment.

Education

B.S., Computer Science — *September 2009 - December 2012*
Minors: Mathematics and Physics
Western Washington University, Bellingham, WA

Patents

"Wrist-worn athletic device with gesture recognition and power management" (Co-invented) US Patent WO2015021223A1 by Nike, Inc.

Relevant Courses

Fourier Analysis & Partial Differential Equations	Bioinformatics
Mathematical Modeling	Compiler Theory and Design
Introduction to Complex Variables	Computational Physics
Linear & Nonlinear Optimization	Quantum Mechanics
Formal Languages & Automata	Classical Mechanics
Operating Systems	Modern Physics

Technical Skills

Programming Languages: Python, JavaScript, Java, C++, Ada, C, C#, SQL

Unix Tools: Git, Bash, Vim, Lex, Yacc/Bison, GCC, GDB, GNU Make

Operating Systems: Linux (Debian, Ubuntu, Gentoo), Mac OS X

Awards and Honors

Most Useful Award, Yelp Hackathon *2013*

Honorable Mention, Mathematical Modeling Contest *2012*

Personal Projects

Google Maps Pac-Mac: - JavaScript, CSS, and HTML 5

Probabilistic WiFi Geolocation - Figaro (Scala), Javascript, CouchDB and Cordova

Hobbies

Programming, Electronics, reading, soccer, unicycling, swimming, skiing, and traveling