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## **Skills**

**Programming:** Python (7 years, Django, Tornado, webapp2 and Numpy), Javascript (5 years, including jQuery and Backbone), HTML/CSS

**Other Technical:** statistical design of experiments, artificial neural networks, mainframe batch programming, business intelligence using Cognos toolset

**Teamwork:** Experience working as an effective team member with small startup, corporate, and university cultures, in teams managed by American, German, and Japanese leaders

## **Experience**

### **Lab7 Systems (Software Developer, March 2017 - present)**

- Third contract with same employer
- Python code related to use of tornado asynchronous web framework
- Javascript (Backbone, jQuery, and d3)

### **Q2eBanking (Software Developer, January 2017 - March 2017)**

- Mix of python, javascript, SQL, and integration
- Helped contribute python expertise to a team of diverse skillsets

### **Real Estate Business School (Software Developer, September 2016- November 2016)**

- Only developer on the team (no test environment, no deployment infrastructure, etc.)
- Helped to troubleshoot and correct an immediate and urgent problem (in production) with a website that used facial recognition (based on OpenCV and OpenBR) for login and identity verification
- Traced through existing python and javascript code, which utilized the webapp2 web framework and peewee ORM, to determine how best to provide quick relief
- Advised the ownership on how to transition to a more maintainable/sustainable tech stack given their lack of permanent software developers

### **Compass Learning (Software Developer, January 2016- May 2016 (half-time))**

- Second contract with same customer
- Wrote ETL code in python for importing from legacy system to new product
- Wrote audit and update code in python to check new inputs to system, and correct any problems found (where an automatic solution was possible) or write to an error file (where not)

### **Andrew Harper (Software Developer, October 2015 - January 2016 (full-time) – May 2016 (half-time))**

- Wrote python/django code to interface with Stripe and Mandrill external systems
- Wrote client-side code using Backbone.js, for internal customer-facing web pages relating to

auction system

- Wrote python ETL code to take data on subscriptions, purchases, and addresses from a legacy, external system and imported them to internal system (including validity and integrity checks)

### **Compass Learning (Software Developer, January 2015- July 2015)**

- Wrote ETL (extract-transform-load) system from scratch, in Python
- Exported legacy data as spreadsheets for markup by subject matter experts, then re-imported and validated data, and parsed related JSON and XML
- Used REST-based API to load data to new system
- Documentation and training for permanent employee who took over the code when contract ended

### **Lab7 Systems (Software Engineer, July 2014- November 2014)**

- Second contract with same employer
- Back-end programming used Python (Tornado web framework)
- Front-end programming used Javascript (Backbone and jQuery)
- Implemented or expanded several new sections of their LIMS (Laboratory Information Management System)

### **Pearson North America (Software Engineer, August 2013 – May 2014)**

- Programmed in Javascript (Backbone.js client-side MVC)
- Worked on integrating system with TinyMCE, MathML/MathJax
- Flexibly worked with both permanent Pearson developers (who had previous technical decisions that had to be respected) and new contractors (who had many questions while onboarding and looked to me as a fellow new developer for assistance)

### **Lab7 Systems (Software Engineer, Feb 2013 - June 2013)**

- Programmed in Python (Tornado web framework, SQLAlchemy ORM) for an application aimed at gene sequencing customers
- Javascript programming of interface for User Accounts Management module (mostly using jQuery and jQueryUI)
- Assisted in debugging of D3/Backbone based Javascript in crunch time prior to (successful) product demo at a conference

### **Life Technologies (Software Engineer, April 2012-Feb 2013)**

- Programmed in Python on a next-generation gene sequencer platform
- Incorporated numpy/scipy/matplotlib libraries and pre-existing in-house scientific code (written by a departed programmer) as well as my own code, and moved project successfully to completion
- Also worked with personnel in gene-sequencing Core to improve an in-house LIMS based on Python/Django/jQuery

### **MapMyFitness (Backend Developer, Sep-Dec 2011)**

- Programmed in Python on a Django-based application

- Worked in Selenium
- Created sftp-based process to update from 3rd party via a djcelery chron job
- Flexibly worked in javascript/jquery, python, and SQL to achieve objectives

### **University of Texas (Senior Systems Analyst, 2004-2010)**

- Analyst in Accounting IT with responsibility for inventory and scholarship systems, including programming, meetings with users, and project management for rollout of new systems
- Created web pages for high-security project to store tax id information separate from other files, including tracking of usage and automatic shutdown if a scripting attack was detected
- Taught staff courses on XHTML/CSS, Javascript, jQuery
- Coordinator for six-month program to train new analysts in web and mainframe programming
- Created first Python-based web application in Education and Professional Development department (including MySQL and Apache setup)
- One year working in Business Intelligence (Cognos tool suite)

### **Webmaster for Secret Oktober (part-time 2004-present)**

- Part-time webmaster for online store [www.secret-oktober.com](http://www.secret-oktober.com) (full disclosure: my wife is one of the owners), 2-3 hours per month
- Experience with HTML/CSS, osCommerce, and Wordpress/Prestashop versions of the website
- Used Google analytics, Google ads, and other Google webmaster tools to analyze site traffic
- Analyzed incoming traffic to give targeted feedback to store owners on what customers coming to their site were looking for
- Trained both store owners on how to use administrative side of website, and learned more about their business process to help set priorities for new features

### **Manufacturing Engineer for Advanced Micro Devices (1989-1996 and 1999-2004)**

- Responsible for trouble-shooting process problems independently
- Successfully worked with employees of very different technical backgrounds and job duties, often translating the stated needs into technical requirements (either for myself or others)
- Extensive experience using statistical analysis tools for both process monitoring and new process development

### **Master's Degree in Electrical Engineering, Southern Illinois University(1997-1998)**

- GPA of 4.0 (out of 4)
- Electrical Engineering, specializing in software simulations of neural networks

### **Bachelor's Degree in Electrical Engineering, University of Illinois (1985-1989)**

- GPA of 4.0 (out of 5)
- Electrical Engineering, specializing in semiconductor device physics