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### **Objective**

An engineering position where my skills and experience will add value.

### **Career Highlights**

- At Ascentive, I built “Envoy” which tracked customer purchases, handled affiliate payouts and provided analytics for marketing campaigns. Envoy is still in use (and actively being developed), and has processed **over \$50 Million in revenue**.
- At CliqSearch, I wrote “Vger”, a node.js based system to crawl Facebook Graph. Performed over **600 million API calls** in approximately 12 months.
- At National A-1, I built a promotional tool management system with PHP and Javascript. Throughput was **~400 Megabits/sec** with **3K concurrent connections**. Also introduced **jQuery** to the office development environment.
- At Turntide, I wrote a testing system to send over **1,200 emails/sec** through our Appliance, using asynchronous I/O with the **Twisted Python** framework.

### **Employment History**

Independent Consultant, Philadelphia, PA, March 2013 to Present

- At Ascentive, I am reprising my role and working on infrastructure and metrics. Currently using Zend, jQuery, and Highcharts to create a graphing system which shows sales metrics and call metrics for the entire sales force.
- Currently working for a stealth startup. Responsible for using the Amazon Web Services to perform code deployments, scale up load, and assist programmers with architectural decisions.

Leadnomics, Philadelphia, PA

Principal Software Engineer, October, 2012 to March, 2013

- Researched the AWS Elastic Map Reduce product and used it to build a Hive cluster running on top of Hadoop. Created a message-based system so multiple machines could concurrently import data into Hive for business analysis purposes.
- Evaluated Vagrant and began using it for development purposes and for testing out Chef recipes. Created Chef recipes that could be used to build development machines.
- Contributed to LeadEngine, our node.js-based system for auctioning hundreds of leads in real time to multiple buyers.

Zooyan.com / CliqSearch.com / Whims.me, Philadelphia, PA

Principal Software Engineer, December 2010 to October, 2012

- Wrote "Grimlock", our web services platform running under the Express webserver with nginx as a front-end proxy. Besides internal uses, it served as the API for our partner

- Yext.com to update listings through CliqSearch.com.
- Wrote "Transwarp", our search system using Elastic Search to index and perform full-text searches on **over 2 million venues**.
- Built a statistics and monitoring system using Graphite and Statsd. This monitors everything from page rendering times to business metrics in near-realtime. Over **100,000 metrics** are processed each day.
- I implemented several Best Practices including: revision control with Git, setting up a separate development environment, monitoring with AmazonWeb Services' Cloudwatch, and refactoring existing code.

National A-1 Advertising, Philadelphia, PA

Senior Software Engineer, December 2005 to December 2010

- **Architected an MVC PHP framework** for Secrets.com. Framework was subsequently reused by other developers for additional projects.
- Installed PHPUnit and transitioned to test-based development. Due to multiple test runs/day, caught several serious bugs before code went live.
- Implemented web-based QA and regression testing process for testing existing PHP code using the Selenium framework.
- Participated in a **rewrite of our flagship website** (www.vod.com), was responsible for user management and database abstraction subsystems. Wrote code that could scale to thousands of simultaneous users.
- Designed and implemented a **tagging system** so that users could categorize content based on their own preferences and view other movies which had similar tags.
- Developed a PHP-based **caching system** to speed up display of pages by 1-2 orders of magnitude and reduce database load significantly.
- Performed an extensive code review and analysis on existing codebase, and found and fixed **hundreds** of pre-existing SQL-injection vulnerabilities.

Symantec Corporation, Conshohocken, PA

Software Engineer, July 2004 to November 2005

- Ported web-based front end for the SMS 8160 Appliance from Ruby to PHP.
- Implemented subsystem in the UI for doing "one-click" software upgrades.
- Implemented graphing subsystem for tracking email volumes using the rrdtool application.
- Wrote a series of functional tests for the UI using the Selenium testing framework.

TurnTide Corporation, Conshohocken, PA

Software Engineer, April 2004 to July 2004 (purchased by Symantec)

- Wrote a scanning engine that would score emails for spam content based on regular expressions from publicly available databases.
- Purchased by Symantec in July, 2004 for **\$28 million**.

Ascentive LLC, Philadelphia, PA

Software Engineer, August 2001 to April 2004

- Designed and implemented a class hierarchy in PHP that contained reusable components for interacting with financial gateways, enforcing business rules, and importing sales data from third parties.

- Migrated project development into a CVS repository so that changes between releases could be tracked and software updates could consist of fewer files.
- Designed and implemented a multi-threaded mailer in Python for sending offers to customers and business partners, at the rate of **50,000 emails/hour**.
- Refactored legacy Perl CGIs into separate modules to ease future enhancements, wrote a debugging system for gathering detailed information from script execution, and designed a custom protocol so that the CGIs could interface with the new PHP system.
- Developed a strategy for loading PHP code on an “as-needed” basis to optimize performance on campaign landing pages. This allowed us to run larger advertising campaigns with less hardware.

Renaissance Integration, Whitehall, PA  
Software Engineer, October 1998 to July 2001

- Designed and implemented a high-level, vendor-independent database interface to decrease programming time and increase application portability. Structured as a set of PHP libraries, the API automatically constructs a query suitable for the database being used, passes it to the database engine, and reformulates the results as needed.
- Designed and implemented a software package to perform analysis of Oracle databases on a nightly basis and report statistics and trends in the database's usage.
- Designed and implemented a set of scripts in SQL\*Plus and SQL to streamline database administration by automating creation of new Oracle users.
- Designed and implemented web-based tools in PHP and Javascript to be used when designing Oracle database schemas, but testing the costs of complex queries and to assist with sizing of table and index extents.

## Experience

Languages I really like: PHP, node.js, UNIX Shell scripting, Javascript, HTML/CSS

Other Languages I know (to varying degrees): Python, Perl, C

Operating Systems: Ubuntu Linux, Amazon Linux, Apple OS/X

Other Technologies: Amazon Web Services, Git, jQuery, PHPUnit, Subversion, Selenium, ExpressJS, Apache, Nginx, PHP-FPM, MySQL, Daemontools

## Volunteer Activities

The Save Ardmore Coalition, a 501(c)4 non-profit corporation, 2005-present  
Webmaster and Board of Directors

- Migrated website from a set of several static pages to a database-backed Drupal-based CMS. The site now contains **over 6,500 posts** and has several contributing bloggers from the Lower Merion area.
- Successfully fought off an **abuse of eminent domain** from our township and saved several local businesses.

Anthrocon, Inc, a 501(c)7 non-profit corporation, 2001-present  
Webmaster and Board of Directors

- Responsibilities as Operations Director include logistics before, during, and after our yearly convention of **5,000 attendees**, management of my staff of 8 people in the Operations Office during the convention, writing staff schedules, and acting as a liaison between other departments and our venues.
- Wrote our pre-registration and onsite registration system for our 2009 through 2012 conventions. Total lifetime revenue of this system is over **\$1 Million**.
- Responsible for management and sysadmin of our website and forums, a Drupal-based system with over **10,000 users**.

CAUCE (Coalition Against Unsolicited Commercial Email), 1997-2007  
Co-founder, Board of Directors, Webmaster

- Formerly served on the Board of Directors as Membership Coordinator, the primary point of contact for receiving inquiries from our membership of **30,000 members** and the general public.
- Served as webmaster for several years, migrating the website from ASP to a LAMP system running Drupal.

WHOA (Working to Halt Online Abuse), 1997-present  
Board of Directors

- Responsibilities include providing technical guidance to the organization and technical assistance to victims of online harassment or stalking.

### **Education**

Allentown Business School, 1996-1998  
Earned an Associates Degree in Network Technology (3.75 GPA)

### **Honors**

Eagle Scout, Boy Scouts of America.

Survived while chained to a bunkbed with a **velociraptor** for 85 seconds.