

## Work Experience

- **TextMarks, Inc.** San Francisco, CA (working remotely)  
*Software Engineer* June, 2012 - Present
  - Responsible for the maintenance, enhancement, and future direction of the Linux infrastructure for a small software company.
  - Built a formal staging environment for company's applications; extended the staging environment to support continuous integration and deployment.
  - Audited system configuration for security issues; brought systems in-line with best practices and addressed any issues found.
  - Extended and improved existing monitoring systems.
  - Deployed configuration management across systems, simplifying maintenance, improving build times and ensuring that current and future systems would be built and configured in a consistent, well-understood and carefully reviewed way.
  - Added features and fixed bugs in web applications and backend code as necessary.
- **I&IT Systems, California State Polytechnic University, Pomona** Pomona, CA  
*Operating Systems Analyst* September, 2010 - June, 2012
  - As part of a team, supported and maintained Linux systems, identity management services, web applications, file storage and other services used by 25,000 end-users.
  - Modified the open-source vSPC.py project to meet internal requirements for a VMware virtual serial console aggregator.
  - Led efforts to build fault-tolerant OpenLDAP, Kerberos, and web services
  - Deployed automatic fault-triggered kdump generation across RHEL servers; discovered CVE-2011-3588, CVE-2011-3589, and CVE-2011-3590 while evaluating kdump for internal use; worked with vendor to resolve security issues.
  - Worked with web developers to help debug performance issues and design scalable applications; provided guidance on best practices for web applications on Linux web servers.
  - Created, maintained, and enhanced internal productivity, automation and monitoring tools.
  - Evaluated and installed software updates; worked within a formal change control process to schedule disruptive maintenance.
  - Worked with upstream software developers and vendor support as necessary to diagnose and fix software and hardware faults.
- **Google Summer of Code and the Tahoe-LAFS project**  
*Summer of Code student* June - August, 2010
  - Designed and implemented segmented mutable files in Tahoe-LAFS, a fault-tolerant decentralized filesystem with provider-independent security.
  - Designed on-disk format for segmented mutable files.
  - Modified mutable file uploader to support efficient partial updates to segmented mutable files.
  - Modified mutable file downloader to support streaming downloads of segmented mutable files.
  - Modified web interface, HTTP API, SFTP interface and command-line tools as necessary to support segmented mutable files.
- **I&IT Web Development, California State Polytechnic University, Pomona** Pomona, CA  
*Web Developer* April, 2009 - June, 2010
  - Used php and other tools to develop web applications in a Linux environment for use by the campus community.
  - Designed and implemented tools to allow users to copy files from a legacy storage system to a new ZFS storage system and to intuitively manipulate access control lists on the new ZFS storage system.

- Redesigned, reimplemented, and extended a tool allowing users to easily customize university HTML templates for use in their personal and course websites.

- **Cooperative Education, California State Polytechnic University, Pomona** Pomona, CA  
*Web Developer* August, 2006 - April, 2009
  - Responsible for the maintenance and enhancement of the Cooperative Education website.
  - Designed and developed a new Cooperative Education website, allowing students and office staff to interact with many important aspects of the Cooperative Education program online.
  - Maintained and enhanced the servers that run the Cooperative Education website, bringing them in-line with best practices for Linux servers.

## Volunteer and Open Source experience

- 2009–2012** Core contributor to Tahoe-LAFS, a fault-tolerant decentralized filesystem offering provider-independent security. Contributions include work on immutable file upload robustness, segmented mutable files, bugfixes, tests, code review, and documentation.
- 2011–2012** Created and maintained a fork of the vSPC.py project. Added VM console logging, SSL encryption for client to ESX host communication. Reworked vSPC architecture so that the vSPC didn't need to pre-emptively open a local telnet listener for each connected VM.

## Education

- **California State Polytechnic University, Pomona** Pomona, CA  
*Master of Science in Computer Science* September, 2009 - December, 2011
  - **Thesis:** *Robust Resource Allocation in Distributed Filesystems*
  - **Coursework:** Programming language semantics, computer architecture, algorithms, abstract algebra, combinatorics, advanced graph theory.
  - **Activities:** Selected as a finalist in the California Cyber Challenge; attended the California Cyber Security Boot Camp; led the third-place team (of 12 teams) in the CTF competition at the end of the camp.
- **California State Polytechnic University, Pomona** Pomona, CA  
*Bachelor of Science in Computer Science* September, 2004 - June, 2009
  - **Activities:** Science Council representative and webmaster for the Computer Science Society, a student club.
  - **Coursework:** Algorithms and data structures, software engineering, robotics, basic cryptography, number theory, graph theory, computability.

## Skills

- **Software Development:** Comfortable with web development using the Django and Zend frameworks, shell scripting and automation with Perl, Python and bash, and asynchronous programming using Python and the Twisted framework. Used Java and Haskell to implement course projects in school. Comfortable writing automated tests. Familiar with basic C programming. Comfortable writing SQL queries. Willing to learn whatever tools are appropriate for the job at hand.
- **System Administration:** Comfortable administering systems running modern \*nixes; particularly experienced with RHEL and Gentoo Linux. Comfortable with configuration management; particularly experienced in cfengine and Puppet. Comfortable troubleshooting complex system issues throughout the stack using tools like gdb when necessary. Comfortable with highly automated infrastructure; experienced at identifying and successfully automating repetitive tasks.
- **System and Software Security:** Familiar with security best practices; comfortable evaluating software and system configuration for potential security issues and working with stakeholders to ensure that any issues are resolved.