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Accomplished software engineer with expertise creating redundant, large scale, high performance enterprise UNIX services; utilizing pattern-oriented, test driven, iterative development.

- Over 10 years of backend server-side software development experience utilizing a diverse set of technologies and frameworks on UNIX systems.
- Familiar with all aspects of website creation and maintenance from design, development, deployment and production monitoring.
- Expert in designing and developing fault-tolerant scalable Internet services.
- Source contributor to nginx.
- Author django-yacapp - A commenting application for django.
- Experienced working with geographically distributed development teams.

## Knowledge of Concepts

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Abstraction ≡ Simplicity + Clarity + Generality	Refactoring Design Patterns	Content Management & Distribution IP Security
Object-Oriented Development	Protocol Implementation	System Administration
Configuration Management	Specification Writing	Performance Tuning
Agile Development	Team Building	Project Management

## Technical Knowledge

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### Languages

C · JAVA · PYTHON · Perl · PHP · JavaScript

### Operating Systems

SOLARIS · UBUNTU · Debian · RHEL

### Source Modifications

nginx · Apache · Exim · ProFTPD · qmail

### Frameworks

DJANGO

### Amazon WebServices

EC2 · S3 · SQS

### Markups

HTML4/5 · CSS2 · L<sup>A</sup>T<sub>E</sub>X · XML/XSLT/Xpath

### Libraries/APIs

Facebook Graph & REST · Flickr REST · last.fm REST  
Spring · Guice · Hibernate · java.nio · JMX · JMS  
boto · PIL · JQuery · libc · libsocket · libdb · libpthread

### Standards/Protocols

HTTP · CGI · AJAX · DNS · LDAP · FTP · XMPP ·  
SMTP · POP3 · IMAP · SSL · SQL · OAUTH

### Tools

GNU Userland · Console IDE(Vim+ctags+screen) ·  
DPKG & APT · gdb · purify · valgrind · DTrace  
ECLIPSE · Ant · CruiseControl  
GIT · Subversion · CVS

## Work Experience

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### President - Stateles, LLC

January 2009 - Present

712 Birch St #F ◊ Honolulu, Hawaii 96814-2920

Consulted and authored UNIX services for leading technology companies using django, Amazon Web Services and Java.

- Developed a video encoding framework for transcoding legacy videos to H.264 using Amazon Web Services. Once a video had been stored on S3 a SQS message would be sent, the EC2 nodes would pull from the queue process the video and upload the transcoded video to S3 sending a completed message to the queue. The number of processing nodes could be changed depending on the desired processing time.

- Authored autoindex\_ignore directive for nginx. Files matched by the specified regular expression would be ignored in the autoindex.
- Developed Java location server. Files indexed by an UUID would be requested through an HTTP/JSON interface. Then the file location on local storage or S3 would be returned.

**Blue Lava Technologies, Inc.**

November 2006 - June 2009

55 Merchant St ◇ Honolulu, Hawaii 96813

**Director of Operations - ilovephotos.com & kindfish.com**

- Created scalable facial detection and video encoding architecture using Amazon Web Services. Photos uploaded to ilovephotos.com would be stored on S3, then a SQS message would be queued. EC2 would pull from the queue and process the job. The nodes would grow or shrink depending on the queue size.
- Developed Facebook and Flickr integration for ilovephotos.com. Photos imported from the external provider would be processed with our facial detection software, then the tags would be exported back to the provider.
- Authored new views and functionality working closely with the design, QA and business teams.
- Oversaw the deployment, management and maintenance of the development, QA and production environments.
- Responsible for site administration including DNS, mail, software installation.
- Established an apt-get repository to facilitate package deployment and configuration.
- **Director of Operations - ilovephotos.com**
  - Developed scalable ILP facial detection architecture, using OpenCV, SQS, S3 and EC2.
- **Senior Software Engineer - kindfish.com**
  - Authored a Java applet for uploading photos with thumbnail previews and support for photo rotation.
  - Developed a co-branding architecture for Kindfish, users would be presented with a different look and feel dependent on the url's tertiary domain.
  - Developed a Video encoding architecture using SQS queuing and EC2.
  - Integrated support for Facebook, Flickr and Plaxo Kindfish.

**EarthLink, Inc.**

January 1999 - June 2006

3100 New York Dr ◇ Pasadena, California 91107

- Principal maintainer of; Apache, Exim, ProFTPD, MFUServ, LDAP authentication module, el\_auth, el\_list. WebSiteNOW {Click-n-Build}, Urchin.
- **Senior Software Engineer - Voice Applications**
  - **Andromeda Phase II**
    - \* Updated the LDAP authentication engine to support fail-over, round-robin load balancing and configurable timeouts.
    - \* Developed monitoring tools for use with BigBrother and FogLight.
    - \* Setup CruiseControl to monitor project integration and provide historical CVS information.
- **Senior Software Engineer - Core Communications**

- Extended rate-limiting support in exim for better control and tracking.
- Updated MFUServ to support uuid based authentication and shared passwords for administrative use.
- Authored command line utility for el\_auth to support manual look-ups.
- Created Perl extension interface for the C based el\_auth API using Perl XS.

- **Mail Rearchitecture - Senior Developer**

- \* Finalized design and implemented Preferences API. It replaced direct reading and writing to the user's preferences flat file with abstraction layer supporting pluggable modules, allowing future migration to a BerkeleyDB store.
- \* Finalized design and implemented a generic C list API modeled after the C++ STL list interface. It supported vectors, dequeues and doubly linked lists. Each list type was interchangeable with other and accessible through a common list API.
- \* Added hook support ala Apache to MindMail. The mail processing logic was split, based on the command it supported, into run-time loadable modules that were configuration driven.
- \* Extended and unified logging in MFUServ.
- \* Updated MFUServ, Exim and the LDAP authentication module to utilize the new APIs.
- \* Augmented build tools, build.pl, to better support collaborative development.
- \* Created automated test tools called by build.pl.

• **Hosting - Senior Software Engineer**

- Project Lead to replace WU-FTPD with ProFTPD, authored modules to support the three hosting farms.

- **Atlanta Free-Web Re-architecture - Lead Developer/Architect**

- \* Designed and implemented modifications to the Atlanta home hosting platform to support child based accounting versus parent.
- \* Introduced DEC uuid based hashing to improve scalability.
- \* Updated the Apache FreeWeb module to use the new accounting and hashing.
- \* Authored a bandwidth limiter to track traffic usage through Urchin. It would send automated emails at soft and hard limits, shutting down the site it exceeds it hard quota.

- **Hosting 2.0 - Lead Developer**

- \* Implemented core applications for the second generation of EarthLink's virtual domain hosting platform.
- \* Updated MindMail to support mail forwarding, aliasing and vacation messages.
- \* Modified MindMail, Vpopper to support herds and metaherds for distributed storage.
- \* Authored ProFTPd module to replace main source modifications in WU-FTPD.
- \* Authored LDAP authentication module.

- **Third Party Application Development - Associate Software Engineer**

- \* Responsible for the configuration and maintenance of Urchin and WebSiteNOW.
- \* Automated numerous processes related to provisioning and maintenance.
- \* Added multiple domain support to WebSiteNOW.
- \* Reduced Urchin processing time by 40% (5 hours) by using I/O and CPU resources more effectively.
- \* Wrote a guestbook using a BerkeleyDB store for use with WebSiteNOW.
- \* Worked with third-party vendors to customize their software to EarthLink's architecture.