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# Overview

*Experienced developer seeks engaging, remote-friendly projects. I have built:* concurrent distributed systems, provisioning tools, automation, web sites & services, geo-aware applications, recommendation systems, social networks, instant messengers.

# Software Development

Languages: Erlang, Elixir, Python, Bash, Javascript/JSON, Elisp, HTML, CSS, Java, SQL, Regex, C, C++, XML.

Web: Curl, (Geo)Django, Nginx, Mochiweb, Nitrogen, Apache, Memcached, Twisted, JQuery, Greasemonkey.

Database: Postgres/PostGIS, MySQL, Riak, Mnesia, CouchDB, Berkeley DB.

Devtools: Emacs, Git(hub), Hg, Jenkins, Mock, xUnit, Firebug, Subversion, Selenium.

Protocols: HTTP/S, SSH, SMTP, IRC, DNS, DHCP/BOOTP/PXE, TCP/IP, AMQP(RabbitMQ).

Methodologies: Open Source, Test Driven Development, Scrum.

# Operations

*Tools:* Fabric, Tmux, Screen, Virtualenv, VirtualBox, VMWare, Supervisor, Iptables/ufw, Zenoss, Nagios, Hyperic, Vagrant.

Operating Systems: Linux (Ubuntu, Debian, CentOS), MacOS X.

# **Employment History**

## **Erlang Developer**

*IBM* (San Francisco, CA) *June 2015–Present* 

Cloudant DB Core development

## Software Developer

Upstart Mobile (Redwood City, CA) May 2012–Present

• Maintained and enhanced distributed Erlang hailing system for flywheel.com (formerly cabulous.com)

## Software Developer

genForma (Sunnyvale, CA) April 2010–April 2013

• Created Python provision library for customized node deployment in the cloud https://github.com/genforma/provision

## **Software Developer**

*Blipboard* (San Francisco, CA) *April 2009–April 2010* 

Created geolocating mashup using Google Maps, Twitter Search & JQuery
Prototyped distributed key-value data storage layer using Riak

## **Software Developer**

Independent (San Francisco, CA) July 2008–April 2009

• Created m82.com: a free anti-spam service running Nitrogen on Erlang/OTP and Postfix, with a RESTful interface and Greasemonkey script; source at http://github.com/jaydoane/subdomain

# **Operations Engineer**

*Loomia* (San Francisco, CA) *May 2006–July 2008* 

• Managed data center of rapidly scaling web services startup

- Wrote configuration and release automation tools
- Optimized schemata to improve performance and enable MySQL dual-master replication
- Automated service monitoring and developed algorithms to selectively throttle destabilizing traffic

### **Senior Software Engineer**

*Tribe Networks* (San Francisco, CA) *March* 2005–April 2006

- Created contact importer tool
- Implemented content tagging & flagging feature
- Wrote high-throughput, caching email digest system

### **Bioinformatics Developer**

*The Molecular Sciences Institute* (Berkeley, CA) *March 2003–October 2004* 

Maintained & enhanced Monod, a Java based, open source, collaborative, molecular biology model building tool

### Software Developer

*Freelance* (San Francisco, CA) *September* 2001–*December* 2002

• Wrote C++/STL generic correlation detector for PlanetQuest open source extrasolar planet discovery application • Built multithreaded Python data collector and state controller for solar power system

### **Software Architect**

Modulant Solutions (San Francisco, CA) February 2001–September 2001

- Designed inversion-of-control architecture for schema mapping and data transformation components
- Implemented benchmarks, identified and solved performance bottlenecks

### **Principal Engineer**

vivid studios/Modem Media (San Francisco, CA) March 1999–February 2001

• Scoped, wrote proposals, pitched, specified requirements, documented technical design, implemented, and developed maintenance plans for 3-tier web applications, primarily using Java/J2EE

### Software Engineer

THEM Productions/Online Partners (San Francisco, CA) February 1995–July 1998

- Developed web based instant messaging application with a Java client and IRC-based C server interfaced to Postgres
- Decreased server downtimes by writing server supervisor Perl script with X10 interface
- · Built multimedia script editing tool with Delphi for Windows
- Developed the PC version of the Electronic Arts game Psychic Detective in C++

## Education

**Certificate in Web Programming with Erlang** Erlang University

**Ph.D. in Astronomy and Astrophysics** University of California, Santa Cruz

**B.A. in Physics** University of California, Santa Cruz

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