

## DEVON H. O'DELL

### SYSTEMS SOFTWARE ENGINEER

SF Bay Area  
devon.odell@gmail.com  
<https://9vx.org/>  
<https://github.com/dhobsd>  
<https://linkedin.com/in/dhobsd>

### OBJECTIVES

I'm interested in the design and implementation of systems software, including operating systems and network servers. My personal interests in the field include concurrency, scalability, debugging, and education. In my work, I hope to experience a confluence of these interests. I endeavor to create scalable and reliable systems software, while contributing positively to culture and diversity.

### PROFICIENCIES

Expert: C, English

Proficient: Bourne shell, Dutch, FreeBSD, Go, Linux, Lua, Perl, PHP, Plan 9

### PROFESSIONAL EXPERIENCE

#### Google

August 2017 - present

San Francisco, CA, USA

Senior Systems Engineer

Systems engineering for AppEngine storage projects. I contribute to the design and implementation of systems to mitigate production issues caused by excessive workloads. I'm also investigating methods to improve the process of diagnosing production problems through automatic methods. I also serve on an on-call rotation for several AppEngine products.

#### Fastly

2016 - August 2017

Remote, Baltimore, MD; San Francisco, CA, USA

Tech Lead

March 2013 - 2015

Software Engineer

Core systems engineering team member. I've improved performance and scalability of Fastly's caching layer, contributed to open source projects, implemented numerous features, and created novel debugging solutions to work around some issues making debugging prohibitively difficult given Varnish's architecture. My proudest achievement has been successfully mentoring a team member from our support organization to be able to contribute to Varnish, which included mentoring her on C programming.

#### Message Systems, Inc.

July 2012 - March 2013

Columbia, MD, USA

Lead Software Architect

January 2012 - June 2012

Software Architect

January 2011 - December 2012

Lead Software Engineer

November 2008 - December 2010

Software Engineer

I served an interesting role in Message Systems development due largely to my diverse development background. My experience with networking, C, PHP, and Perl led me to work on almost every aspect of all products. At Message Systems, I designed and implemented architectures for multiple highly scalable and

configurable systems, including an MX gateway, targeted email sending platform, and search engine. I managed small teams of developers across multiple projects. I also implemented various features, debugged customer issues according to SLA, and improved test cases and infrastructure across all of our products.

**Coyote Point Systems, Inc.**  
**July 2006 - December 2007**

**Millerton, NY, USA**  
**Software Engineer**

At Coyote Point, I served as a kernel and software engineer: optimizing network performance, developing features and debugging our FreeBSD-based kernel. Here, I implemented a switch management interface for a Vitesse VSC7390-based switch board (which included debugging firmware). I implemented, debugged, and fixed kernel-level code in the FreeBSD network stack, device drivers, and VM subsystem. I implemented and supported our SNMP agent code, and improved our CM/CI, build, and installation toolings.

**Offmyserver, Inc. DBA iXsystems**  
**2003 - June 2006**

**Remote, Zutphen, Holland; San Jose, CA, USA**  
**Software Developer**

I created and maintained “RAQdevil,” a port of the Sun Cobalt RaQ platform to FreeBSD. I also fixed various FreeBSD kernel issues on Intel BladeCenter machines, including keyboard controller and ACPI issues. I implemented group quota support and settable quotas on NFS filesystems. I Developed automatic stress testing suites, administered the local network, and administered QA tests on systems, reducing RMAs.

**Bug Logic**  
**May - December 2001**

**Asheville, NC, USA**  
**Web Application Developer**

I developed several custom web applications and Flash games for customers, and administered our local network of approximately 15 machines, including systems running MacOS 9.2, FreeBSD, Windows, and Red Hat Linux.

**Retirement.net**  
**February - May 2001**

**Asheville, NC, USA**  
**Web Application Developer**

Developed search engine, administration interface, and ad tracking code.

## PRESENTATIONS / LECTURES

**Building a Debugging Mindset, QConSF 2016.**

Slides / Transcript: <https://9vx.org/post/building-a-debugging-mindset/>

Video: <https://www.infoq.com/presentations/debugging-mindset>

**Debugging (Varnish), VarnishCon 2016.**

Video: <https://www.infoq.com/fr/presentations/varnishcon-devon-odell-debugging>

**Using Race Conditions in Correct Concurrent Software, Strangeloop 2015; OSCon EU 2015.**

Video (Strangeloop): <https://www.youtube.com/watch?v=3LcNHxBJw2Q>

Video (OSCon EU): <https://www.youtube.com/watch?v=jmSiMCENcVY>

**Nonblocking Algorithms and Scalable Multicore Programming, Papers We Love SF 2015.**

Video: <https://www.youtube.com/watch?v=b1sPz92OovI>

**Spinlocks, guest lecture at Johns Hopkins University, 2011.**

Slides: <https://9vx.org/presentations/Spinlocks.pdf>

## PUBLICATIONS

Devon H. O’Dell. 2017. The Debugging Mindset. ACM Queue 15, 1, pages 50 (February 2017), 20 pages. DOI: <https://doi.org/10.1145/3055301.3068754>

Devon H. O’Dell et al. 2002. Professional PHP4. Apress, Wrox Press.

Devon H. O’Dell et al. 2002. Professional PHP4 Multimedia Programming. Wrox Press.

### **EDUCATION**

Completed high school at Madison High School in Marshall, North Carolina. My computer-, algorithm-, and security-related knowledge has been learned through effort, experience, and mentorship.