

James Matthew Brown <j@rglZR.net>

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**TECHNICAL
SKILLS AND
TOOLS**

Languages: Python, C, C++, Ruby, Perl, C#, Haskell, (S/Oca)ML, JavaScript, Java, PHP, POSIX/Bourne Shell, sed
Markup: (X)HTML, L^AT_EX/T_EX, Markdown, CSS
Operating Systems: Linux (Debian/Ubuntu, Gentoo, and Red Hat/CentOS), Mac OS X, Cisco IOS, JunOS, some experience with Solaris and FreeBSD
Software: apache, lighttpd, nginx, BIND, postfix, Courier, SpamAssassin, OpenLDAP, NFS, Samba, rsync, OpenSSH, OpenVPN, bash, zsh, vi(m), portage, apt/dpkg, rpm, puppet, firehol, iptables, haproxy, git, subversion, make, gcc, gdb, libtool, autotools, clusto

LINKS

<https://github.com/Roguelazer>
<http://www.roguelazer.com>

EDUCATION

Bachelor of Science, Computer Science; Humanities Concentration, Music
Harvey Mudd College, Claremont, CA, May 2010
GPA: 3.698 overall (graduated with distinction), 3.853 in-major

Coursework: Data Structures • Software Development • Linear Algebra • Programming Languages • Digital Engineering • Computer Systems • Compiler Design • Advanced Computer Architecture • Algorithms • Computer Networks • Operating Systems • File Systems • Engineering Economics

**WORK
EXPERIENCE**

Infrastructure Engineer, Uber Technologies, Inc, San Francisco, CA 4/2013 – present

- Designed and implemented entirely new OpenID-based single-sign-on solution
- Rearchitected Nagios config generation (using Clusto) and PagerDuty integration
- Led security efforts, including audits of existing code and designs of new secure systems
- Designed and implemented new code and cluster management systems
- Participated in 24-hour on-call rotation
- Contributed to administration of large PostgreSQL cluster, including investigation of core PostgreSQL performance concurrency features
- Designed and implemented new frontend for Graphite using AngularJS

Systems Engineer (DevOp), Yelp, Inc., San Francisco, CA 6/2010 – 4/2013

- Acted as both a developer and a systems administrator to keep multi-million-user website running efficiently across hundreds of machines, more than 200 developers, and hundreds of thousands of lines of code
- Debugged and resolved numerous site issues at all levels, from Ethernet frames to stack frames to iframes
- Was a key player in multi-datacenter scale-out, working to build out cages on both sides of the country as well as managing a hosted virtual datacenter through Softlayer
- Developed staging and deployment procedures and tools
- Administrated developer tools (trac, git, reviewboard, etc)
- Wrote high-performance utilities in C to optimize critical functionality
- Maintained internal Debian/Ubuntu-derived distribution, including both fresh package writing and backports for hundreds of libraries and applications; also, personally planned and executed upgrade of core distribution from Ubuntu 8.04 to Ubuntu 10.04 across the entire network with no downtime
- Participated in a regular 24-hour call rotation and other operations duties
- Largely redesigned internal Nagios setup (over 20000 tracked services) for consistency and scalability
- Worked closely with DBAs on operational maintenance of both MySQL and non-relational databases; also assisted in query debugging and optimization

- Worked closely with the network operations team, including designing new production networks, administrating Cisco, Juniper, and Force10 networking equipment, and both debugging internal and external networking issues
- Interacted with third-party vendors and coordinated millions of dollars of purchases
- Built, experimented with, and debugged “cloud” services, including various CDNs, a number of AWS services (S3, EC2, EMR, EBS, and VPC), and Softlayer’s cloud products
- Led first-response teams for several security incidents and designed new security tools and policies

System Administration Staff, Harvey Mudd College, Claremont, CA 12/2007 – 5/2010

- Led a team of student administrators to manage 80 Apple workstations, 5 Linux servers, 2 Apple servers, 1 Windows 2003 Server, and miscellaneous other machines
- Aided faculty and students in using Computer Science Department resources
- Maintained internal and user-facing documentation and support web-apps
- Wrote scripts and programs to aid in maintenance and eliminate repetitive tasks

Corporate Operations Engineering Intern, Google, Inc., New York, NY 6/2009 – 8/2009

- Performed user support in a mixed-platform environment
- Led user training on both Google-specific and general computing topics
- Designed and implemented a web application running on Google App Engine to integrate multiple data sources for analysis of corporate security logs

Systems Manager, FRED-TV, Fall River, MA 12/2005 – 8/2006

- Managed a network of approximately 30 workstations used for video editing
- Implemented OpenLDAP authentication, network-shared home directories, and Kerberos using Mac OS X Server

**RESEARCH
EXPERIENCE**

Clay-Wolkin Fellow, Harvey Mudd College, Claremont, CA 1/2007 – 5/2010

- Exclusive fellowship for research in digital engineering topics with Professor David Money Harris, sponsored by Sun Microsystems and Intel
- Researched novel methods of digital circuit design, including multiple-output static logic, sub-threshold circuit optimization, and multiplier optimization
- Designed a suite of tools to visualize Verilog files and integrate timing data when optimizing circuit layouts
- Maintained servers and associated CAD software for Engineering Department
- Developed and ran several training sessions to educate other researchers in Unix, scripting, and version control basics

Summer Research Assistant, Harvey Mudd College, Claremont, CA 5/2008 – 8/2008

- Worked on a team of four to explore innovative diagram recognition techniques with Professor Christine Alvarado
- Implemented cutting-edge vision-based recognition algorithms
- Managed and refactored a 65,000-line C# 2.0 codebase

**PERSONAL
ACTIVITIES**

Member, Harvey Mudd College Computing Committee	5/2009 – 5/2010
Violinist, Claremont Concert Orchestra	9/2006 – 5/2010
Violinist, Durfee High School and regional orchestras	9/2002 – 6/2006
Member, Fall River Public Library Board of Trustees	6/2004 – 6/2006