

Rajiv Aaron Manglani

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Summary Creative technical lead with extensive hands-on experience and knowledge in a broad range of information technologies and their applications. Demonstrated technical leadership, vision setting, and innovation in applying technology to solve business problems. Eye for good technical and graphic design. Excellent communication skills. Unique education with a B.S. in Brain and Cognitive Sciences from MIT, which brings diversity and human-factors experience to the design of interactive systems.

Experience **3M ESPE (formerly Brontes Technologies)** Lexington, MA
Architect, Enterprise Applications November 2005–December 2010

Lead web systems architect for a startup acquired by 3M in October 2006. Built a Ruby on Rails-based web application platform designed to support the 3M ESPE Lava Chairside Oral Scanner (COS). 3D models are uploaded from 1000+ scanners worldwide to Case Manager 4 (CM4) while the system handles case workflow, file storage, device management, interfaces to external processing tools, user authentication, auditing, customer training, billing, promotions, and exports to reporting and 3rd-party distribution channels.

- Responsible for the complete system development cycle including bug triage, meetings with product managers, internal 3M users, and customers to understand and address needs and concerns. Selected and consulted with outside user experience experts to design application wireframes. Led technical design sessions to translate business requirements into screen design, technical design, development schedule, tasks, and releases.
- Recruited and managed a 4-engineer development team. Implemented Git and CCRB for multi-branch, test-driven development and continuous integration. Advised QA in identifying critical test scenarios, and design of an automated test framework based on Selenium. Worked closely with Production IT Engineer to deliver a supportable and scalable system. This agile process resulted in regular, weekly production releases.
- Built the 3M ESPE Case Manager 4 platform from the ground up. Created a technical architecture for multiple scaleable web applications using Ruby on Rails, MySQL, Apache, Passenger, Memcached, MogileFS for file storage, RabbitMQ, AMQP, and JSON for inter-application messaging, Djabberd and XMPP for CM4 to Lava COS communication, CAS Authentication for single sign-on, REST-style XML APIs for integration with engineering support tools and 3D production tools running on Windows, and SOAP based integration to 3M billing, reporting, and CRM systems. Set overall vision for IT architecture.
- Architected and developed an interim case management system to support Lava COS scanner beta testing.
- Planned and executed a move of IT systems to new offices. Designed and installed the company's first datacenter. Setup a multi-VLAN network, internet access, PRI links for voice. Migrated critical Gentoo Linux servers from desktop-class machines to redundant hardware.

Angstrom Microsystems Boston, MA
Senior Engineer March 2004–February 2006

Lead system administrator for a producer of 1000+ node AMD Opteron blade clusters. Configured and benchmarked clusters noted on TOP500.org. Selected achievements include:

- Worked on-site with artists and the technical team to design and implement all IT systems for a new film studio in Berlin, Germany. Designed and deployed Alias/Maya workstations, setup DNS and DHCP servers, web proxy hosts, and the rendering cluster.
- Reworked deployment and production infrastructure. Created software deployment servers using DHCP, PXE, TFTP, and SuSE AutoYast, enabling staff to perform thousands of unattended installs. Customized operating system and software loads for each client system.
- Created a PC104-based serial concentrator using Embedded Gentoo Linux.

Gentoo Linux Brookline, MA; Cambridge, MA
VoIP Team Member; Security Auditor September 2002–Present
Volunteer developer for Gentoo Linux, a special flavor of Linux that can be automatically optimized and customized for specific applications and needs.

- Worked on the PowerPC port of the distribution; maintained Asterisk PBX packages.
- Gave training lectures and introductory presentations to Boston-area Linux user groups.

Independent Contractor Brookline, MA; New York, NY
User Experience Designer; Information Architect; Developer April 2002–March 2006

- Built a web development consulting practice. Clients included Wellogic Consulting, Cerner Healthcare, and the Boston VA Medical Center. Conducted user-research workshops intended to describe core audiences and their needs. Developed web sites using PHP with MySQL, Java with JSP, XML+XSLT and XHTML/CSS.

Sapient Corporation Valley Forge, PA; Jersey City, NJ; Cambridge, MA
Senior Engineer; Technical Lead; Site Developer August 1996–July 2001

- Built a technical R&D team of 4 engineers and a project manager. Identified product spaces to evaluate, and functional and technical evaluation criteria. Created development scenarios and prototypes. Wrote white papers and made presentations on findings to internal teams at all US Sapient offices.
- Part of a team tasked with building a targeted brokerage web site for professional traders. Developed Java code for account balances and global navigation components. Hacked site to diagnose security holes. Assumed lead on information architecture.
- Worked as a web application subject matter expert for a team of 12 developers building a web-based 401(k) reporting system. Wrote C code and worked on-site to become immersed in client's existing systems architecture.

The Boston Jewish Film Festival West Newton, MA
Pro-bono Technology Consultant August 1995–Present

- Designed and built a Ruby on Rails film tracking system used to handle film submissions, schedule screenings, and manage production of the annual 10-day event. Setup, monitored, and performance-tuned Linux-based virtual hosting for the Rails application.
- To facilitate production of the annual festival print materials, developed export process and scripts to create Adobe InDesign tagged and formatted text from Rails applications.
- Installed an Asterisk-based PBX system with POTS lines and VoIP hard phones.
- Recovered data from burned and melted computers after a fire destroyed the Festival offices. Selected and purchased replacement servers and office machines.

Education **Massachusetts Institute of Technology** Cambridge, MA
Bachelor of Science in Brain and Cognitive Sciences June 1996
Minor in Writing, concentration in Media Arts & Sciences.

Proficiencies Strong verbal, written, and presentation skills; Apple Keynote, Adobe Photoshop.
Development experience: Ruby, Ruby on Rails, Java, JSP, C/C++, AppleScript, Mac OS X (Cocoa and iOS), Safari Extensions, UNIX shell scripting (bash, csh, tcsh), Subversion, Git.
Web technologies: Apache, Passenger, MySQL, Memcached, MogileFS, RabbitMQ, AMQP, JSON, Djabberd, XMPP, CAS single sign-on authentication, REST and SOAP APIs, PHP, XML/XSLT, HTML/CSS.
UNIX experience: Installation and configuration of GNU/Linux systems and clusters, BIND 9, ISC DHCP, PXE, TFTP, NFS, qmail, OpenSSH, iptables, Linux kernel.
Open source contribution to: Gentoo Linux, Asterisk PBX, MogileFS, Memcached Ruby client, RubyCAS-Server, Djabberd, and OS X Homebrew. Managed the open sourcing of numerous Ruby on Rails plugins and patches to Rails core.
Operating systems and platforms: Mac OS X, Gentoo, RedHat, Centos, SuSE GNU/Linux.

Pursuits Regular presenter at the Boston Linux User Group and MIT IAP.
Eagle Scout with Bronze Palm, Greater New York Councils, Boy Scouts of America.