

Work Experience

Analytics Media Group – VP of Engineering, Acting CTO (Mar 2013 – Present)

- One of three founding employees, overseeing growth to a 32-person staff (projected to grow to 40+ in 2015).
- Lead development of media planning & analysis software including a patent-pending optimization engine using machine learning in Hadoop (M/R & Spark), a Rails frontend, and a Sinatra/Rails micro-services layer.
- Designed relational model for 55+ billion rows of cable set top, consumer, voter, and related data in Redshift.
- Optimized \$22MM of ad spending (+\$48MM in '15). Worked with Fortune 500 companies in entertainment (e.g. NBC, HBO, New Regency, MSG), hospitality (e.g. Choice Hotels), and candidates for Senate & Governor.
- Manage team of ten engineers, designers, and PMs, a personnel & data budget of \$2.0MM, and infrastructure (Amazon Web Services & local) for the full staff.

General Services Administration – Senior Software Engineering Consultant (Feb 2013 – Mar 2013)

- Worked with Presidential Innovation Fellows on myUSA, a Rails & Backbone project to allow citizens to navigate government as a cross-agency experience designed around their needs – not fragmented bureaucracy.

Presidential Inaugural Committee – Senior Software Engineer (Dec 2012 – Feb 2013)

- Developed responsive, low-latency Rails web application to manage volunteers (using AWS, Redis and PostgreSQL) and integrated data for event sign-up and administration (from BSD/Quickbase).
- Implemented modified stable matching algorithm to match 60k volunteers and events.

Democratic National Committee – Lead Developer/Deputy Director of Media Tracking (Aug 2011 – Nov 2012)

- Led design and development of the Democratic Party's state-of-the-art platform for reporting and visualization of gigabytes of media spending, polling, field and other critical campaign data for Obama for America, each of the party committees and other federal campaigns. Directly responsible for four other engineers.
- Planned product with key stakeholders, designed schema, wrote complex reporting and analytics queries, and developed robust Rails frontend used by hundreds of senior campaign staffers and consultants.

Social Security Administration – Computer Scientist and Hardy-Apfel Fellow (Jul 2010 – Aug 2011)

- Worked for the CIO of Vision and Strategy in a team that reimaged SSA architecture and software using modern technologies to increase efficiency and save a billion dollars a year.
- Designed high-level strategy and implemented prototype SOA and a virtualized infrastructure (IaaS).
- Developed eligibility services using Drools rules engine and a "Turbo-Tax"-like, Struts2 web frontend.
- Led design of data model and experimented with BigData solutions (HBase/Cassandra).

InfoExchange – Senior Software Engineer (Dec 2007 – Dec 2008)

- Lead UI/UX developer and frontend Java/Spring, Rails and client-side (AJAX/Prototype) engineer for a financial services start-up developing AI-driven market research software (with Lucene/Solr and ActiveMQ).

iWebPress Inc. – Co-founder/Chief Information Officer (Apr 2002 – Jun 2008)

- Created content and workflow management software (PHP/MySQL) for college and community newspapers. Developed asynchronous web apps before AJAX standard and coded one of the first Javascript animation libraries. Designed products and website, managed infrastructure and contractors, and helped with sales.

Education

Cornell University, College of Engineering, Ithaca, NY

Master of Engineering in Computer Science, May 2010

Relevant Courses: Distributed Systems, Software Engineering, Vision, Machine Learning, Computer Security

Research: Civitas Secure Voting System (coercion-resistant, universally verifiable electronic voting system suitable for national elections); Fusion Research Group (focused on memory hierarchies and performance)

Cornell University, College of Arts and Sciences, Ithaca, NY

Bachelor of Arts in Government and Computer Science, May 2009

Relevant CS Courses: Artificial Intelligence, Operating Systems, Algorithms, Scientific Computing

Exchange Student (2008) at **Freie Universität Berlin**, Berlin, Germany

Technical and Additional Skills

Languages: Functionally fluent in German; **Programming Languages:** Ruby (+Rails & Sinatra), Java/J2EE, SQL, HTML5/CSS 3/JavaScript, PHP, Objective C (iPhone dev), C/C++, SML and MIPS Assembly

Applications: Photoshop/Illustrator, InDesign, Premiere, Dreamweaver and Final Cut

Other: PostgreSQL, MySQL, Hadoop, Apache HTTPD, Geronimo and ActiveMQ, IBM WebSphere and MQ, Redis, Git, UI Design, MediaWiki, Wordpress, Drupal, Active Directory/LDAP, Unix/Linux, basic network engineering