Roger B. Rohrbach

Oakland, CA • roger@ecstaticsignal.com • rogerrohrbach.com • linkedin.com/in/rogerrohrbach

Accomplished software engineer and leader with over 25 years in individual contributor and management roles. Diverse project experience includes contributions to products such as Ingres (PostgreSQL predecessor), VxWorks (real-time OS powering Mars Rover and SpaceX Dragon), Gracenote MusicID® (source of iTunes music metadata), and Betfair (Europe's largest sports betting site). Expertise in requirements analysis, data modeling, software architecture and OO design, Web development, software best practices, and agile methods.

EXPERIENCE

Software Engineering Lead, Elsevier - Berkeley, CA   2019 – present
- Responsible for the Digital Commons Institutional Repository product. Lead development teams practicing Scrum and SVPG "dual track agile" with a high level of throughput and continuous improvement.
- Enhanced and extended a 25-year-old Perl monolith without writing more Perl, by embedding single-page React applications backed by Python microservices:
  - a tool for harvesting metadata pertaining to scholarly publications from sources such as Scopus and arXiv
  - a bulk file storage and import manager
  - a content inventory reporting tool for repository administrators
  - an electronic journals API
- Managed strategic legacy system maintenance, including security and accessibility remediation.
- As delegate architect: worked with Ops to create infrastructure; ensure conformance to enterprise standards and best practices; document architectural decisions.
- As line manager with 4 direct reports: agreed objectives, evaluated performance and assisted with professional development.
- As a member of the technical leadership team: hired engineers, contributed to forecasts and plans and advised executives.

Technology: Python (FastAPI, celery, pandas, scikit-learn), JavaScript (React), Docker, AWS (ECS, Amplify)

Independent Consultant   2012 - 2018
Client Engagements:
- **American Battlefield Trust** (May 2018 - Oct 2018) - Created a schema for information pertaining to Civil War battlefields and recipients of the Congressional Medal of Honor. Built an API supporting location-based queries in support of a map-based browsing application. Technology: PostgreSQL, PostGIS, GraphQL, Node, Heroku
- **American Chestnut Foundation** (Feb 2015 - Mar 2018) Managed and contributed to development of dentataBase, an online repository of data related to chestnut tree breeding, planting and restoration. Instituted Scrum and related practices and served as ScrumMaster. Designed and implemented a role-based access control system. Built a bulk CSV data import facility. Added filtered search functionality. Technology: Ruby, Rails, JavaScript, PostgreSQL, Heroku
- **Theo** (June 2013 - Mar 2016) Built web services in support of a mobile platform for real estate agents. Enhanced MLS replication service with agent, broker tour and open house data. Extended service for multiple realtor associations and MLSes. Added geocoding of property addresses, processing of deleted listings, and search API. Created SSO for mobile and web apps. Technology Ruby, Rails, libRETS, MySQL, AWS (EC2, RDS, S3)
- **The National Campaign to Prevent Teen and Unplanned Pregnancy/Power to Decide** (Dec 2012 - Apr 2015) Developed content and data management features for the Bedsider online birth control support network. Maintained and enhanced SMS-based health appointment and birth control reminder service. Converted SMS infrastructure from Ericsson IPX to Twilio. Built health provider portal to register patients, set appointments, and schedule reminders. Built location-based clinic search function. Added record linkage/deduping to clinic data ingestion system. Added authenticated access, account admin functions, and analytics to API. Technology: Ruby, Rails, Resque

CTO, Fanzy - Paris, France / San Francisco, CA   2011 – 2012
- Managed and contributed to the development of a Facebook app enabling artists, brands et al. to enlist their fans in social marketing efforts and reward them for participation.
- Staffed and managed the development team and instituted Scrum.
- Built asynchronous services to process real-time updates from Facebook, automatically post messages on Page walls, award and revoke badges, distribute rewards, and compile statistics.
- Developed a sentiment analyzer employing the AFFIN affective lexicon.

Technology: PHP, beanstalkd, MongoDB, Ruby, Rails, elasticsearch, Python, AWS

Independent Consultant   2010 - 2011
- **Theo**, San Francisco (2011) Built a data replication service to support a mobile app for realtors, providing retrieval of property listings and photos from MLS via the RETS protocol, and cloud storage and synchronization of app data. Technology: Ruby, libRETS, CouchDB, AWS
- **Smartdate**, Paris (2010) Project manager/developer for an online dating service. Instituted Scrum and trained product managers and developers. Helped create product backlog for relaunch and served as ScrumMaster. Managed outsourced development of a user search service built with Sphinx full-text search engine. Designed REST API, wrote acceptance tests using Rspec, and led efforts to optimize search results. Automated search service infrastructure on EC2 using Chef. Coded web app features against the search service API, using Ruby on Rails and jQuery.

Director of Engineering, Kinfo, San Francisco, CA   2007 – 2009
- Managed development of a photo sharing service for family photos that combined genealogy, social networking, and asset management techniques to provide a collaborative online family album.
- Selected tech stack (Ruby on Rails, Flash, AWS), hired and managed developers, and established development practices including Scrum, XP, TDD, and CI.
- Managed QA, deployment, and infrastructure.**Independent Consultant**   2003 - 2006
- **Wild Brain Entertainment** - San Francisco (2005-06) Led development of a production management system for animated commercials, TV, and film using XP methods. Created product roadmap, project charter and development plan. Selected Python and TurboGears stack. Worked with Product Manager to develop user stories. Pair-programmed with developers.
- **Fluid** - San Francisco (2005) Developed a factory automation system in PHP and Smarty used to manufacture "mass-customized" athletic shoes as part of the Webby-nominated YourReebok service. The system manages incoming orders, manufacturing workflows, packing and shipping; is localized for Chinese and English speakers in different time zones; and supports multiple vendors, factories, and product lines. This product was the primary asset in the subsequent acquisition of Confego (our client) by Zazzle.
- **Shared Media Licensing** - Seattle (2004-05) Program Manager for development of Weed (v3), the first incentive-based digital media economy where consumers were paid to redistribute music files. Prepared functional specs and use cases, collaborated on UI, and tested prototypes.
- **FutureTrax** - Seattle (2004) Constructed a digital audio catalog for this online music retailer. Created sophisticated data model supporting arbitrary playlists as products, multiple download formats, territory licensing restrictions, and extensible associations between artists, tracks and genres.
- **Sony Electronics** - San Francisco (2003) Improved development tools and productivity on the Super Audio CD project. Fixed dependency generation bug in unsupported third-party IDE. Created and documented a template and process for using the IDE in conjunction with Microsoft Visual SourceSafe to manage multiple development projects.
- **CNET** - San Francisco (2003) Helped Site Operations team increase control over software deployment to CNET sites. Assessed testing, delivery and maintenance activities, compiled and prioritized findings and delivered a report with recommendations. Established inter-departmental working group devoted to process improvement.

Manager of Software Development, Flutter.com (now Betfair) - London, UK   2000 - 2001
Organized and managed the software development effort for the world's first person-to-person online betting service.
- Hired developers and created standards for data modeling, software design review and documentation, and release.
- Established technical infrastructure including source code control, development, and QA server environments.
- Managed development during pivot as the company narrowed focus from betting on anything to a sports betting exchange. Led development of new product and collaborated with product team to deliver six feature releases.
- Coordinated move of SF-based development team to London with nearly no turnover and hired three UK developers.
- Introduced use cases and XP practices including refactoring, unit testing, CI, and automated nightly builds.
- Launched a new service that increased revenues 40% in its first week of operation. Flutter merged with its primary competitor to form a business valued at £1.4B in IPO.

Independent Consultant   1999 - 2000
- **Orange Design** - San Francisco (2000) Developed and documented the first Flash Player Detection Kit under contract to Macromedia (Adobe), a comprehensive solution for detecting Flash Players on web clients and controlling the user experience when it has not been installed or is out of date.
- **CDDB** (now Gracenote) - Berkeley (1999 - 2000) Improved reliability and performance of CDDB music metadata service. Reworked server memory management and error handling code. Built an interactive client for troubleshooting. Developed a test language and interpreter with iterative, periodic, and random query execution features used for regression testing and service monitoring.

Senior Software Engineer, Tippett Studio - Berkeley, CA   1996 – 1999
- Helped transform Phil Tippett's stop-motion animation studio into a full-service digital visual effects firm while the studio was producing VFX for *Starship Troopers* and *Armageddon*. Led digital asset management, production tracking tools, and automation of the production pipeline.
- Established standard file system layout for production.
- Defined procedures for setup of new productions and shots, and a protocol for scanning and processing live-action plates.
- Created tools for setup, maintenance, and navigation of workspaces and for managing multiple "takes" (revisions).
- Developed an object-oriented framework in Perl for production management applications, modeling key artifacts of the production process (3D scenes, photographic or rendered image sequences, rendering control files, etc.).

Web Developer, The SoftAd Group (now ChannelNet) - Mill Valley, CA   1995 - 1996
- Sole UNIX developer contracted to help launch Ford Motors website (no prior web experience).
- Set up in-house development server, established protocol for upload to the client, mapped site architecture, and coordinated work of copy editors, artists, and HTML coders. The initial site went live in just six weeks.
- Wrote CGI programs in Perl including dealer locator, budget planner, and finance calculator.
- Developed the Mercury Sable Virtual Giveaway, one of the first online sweepstakes promotions on the web.

Quality Assurance Manager, Xaos Tools - San Francisco, CA   1994 - 1995
- Managed a four-person team testing and validating visual effects software on Silicon Graphics, Mac and PCs. Produced test plans, built testing tools, performed white-box and hardware configuration testing, wrote release notes, created installers, prepared master media, and performed first article inspections.

Software Process Engineer, Wind River - Alameda, CA   1989 – 1994
- Contributed to a target support package and host development environment for the VxWorks real-time OS and integrated the GNU compilation tools.
- Designed and implemented a framework and tool set supporting configuration management, change control, process automation, and tool integration. Built a software manufacturing system using this framework.
- Designed processes for software configuration management in compliance with ISO 9000-3 and ANSI/IEEE 828-1990 standards, and level 2 of the SEI CMM.
- Drafted ISO 9001-compliant procedures for document control (Wind River received ISO 9001 certification).

Member of Technical Staff, Relational Technology (Ingres) - Alameda, CA   1984 – 1989
- Ported Ingres RDBMS to various UNIX platforms.
- Contributed to development of an automated software porting toolkit hailed as groundbreaking by Geoffrey Moore in his 1991 book *Crossing the Chasm*.
- Designed a driver and language for regression testing based on "send/expect" I/O sequences, anticipating the popular testing tool Expect.
- Designed and implemented a client-server change control and configuration management tool with distributed operation in a heterogeneous environment, view-based configuration management, and a semantic revision control model. This work is described in "Galileo: A Software Maintenance Environment," (International Workshop on Software Version &

Configuration Control, 1988). My co-author subsequently founded Perforce Software, which markets a commercial product incorporating many of these innovations.

EDUCATION
Studied piano and music theory at Temple University, Philadelphia, PA
Attended lectures in computer science at the Oregon Graduate Center (now defunct), Beaverton, OR

AFFILIATIONS
Senior Member of the ACM. Voting Member of SIGSOFT. Signatory of the Agile Manifesto.

INTERESTS
Music composition, piano playing and record production. Owner/Operator of [Pinna Records](), a San Francisco-based label with a focus on music by contemporary composers.