Rodney Waldhoff

✉ rwaldhoff@gmail.com
📍 Alexandria VA

Senior engineering lead with extensive experience building multi-tenant SaaS platforms and the web, API, desktop and mobile clients they serve. Consistent record of successful full-life-cycle, full-stack development including feature ideation, UI/UX design, system architecture, software implementation, quality assurance, service operation, analytics, monitoring, and customer support responsibilities as an individual contributor, front-line manager, and director of cross-functional teams.

PROFESSIONAL EXPERIENCE

Technical Lead, Engineering - Cisco Systems   07 / 2021 – PRESENT

Re-recruited by former colleague to contribute to full life cycle microservice feature design, development, testing, and monitoring in support of Cisco's flagship call center and customer support platform, *WebEx Cloud Contact Center*. Responsible for feature analysis, design, and implementation; automated unit, functional, performance, and integration testing; definition and active monitoring of production health metrics; runbook and service management documentation; and 24x7 tier 2 incident response.

Primary Tech: Java, Scala, Spring Boot, Hibernate, Redis, JavaScript, Node.js, Python, PostgreSQL, MongoDB, SQL, Kafka, Grafana, Splunk, Docker, Kubernetes, Kamailio, FreeSwitch, SIP, WebRTC, Swagger/OpenAPI, REST, Jenkins, Jira, PagerDuty, AWS.

- Helped establish a growing US-based complement to the existing India-based development team.
- Audited public-facing REST API to identify security concerns, usability improvements, and documentation errors.
- Rapidly designed and implemented a new public-facing API documentation generation process to address critical issues before key Partner Summit.
- Defined, planned and executed agile epic adding support for control-flow versioning to administrative portal.
- Developed automated PTSN line procurement, registration, and configuration workflow in support of the self-service sandboxed platform instance creation feature of the public-facing developer's portal.

Founder - FATpick LLC   11 / 2020 – 07 / 2021

Creator of and sole contributor to FATpick, a multi-platform music education application that uses sophisticated pitch-detection and onset/offset analysis to provide real-time feedback on note and rhythm accuracy as one plays along with a real guitar. FATpick is a desktop app with runtime dependencies on RESTful web services in the cloud, available for Windows, macOS, and Linux.

Primary Tech: JavaScript / TypeScript, Electron.js, Node.js, Express.js, Web Audio, HTML Canvas, Tone.js, SVG, HTML5/CSS, JSON, REST, PostgreSQL, nginx, HAProxy, Docker, AWS EC2, AWS SES, AWS S3, SEO, XML Sitemaps, Google Search Console, Bing Webmaster Tools.

- Increased organic referrals and earned top-3 ranking for key search terms via programmatically-generated content marketing and on-page SEO.
- Optimized dynamic rendering of full-screen graphics and multi-channel audio and processing-intensive signal analysis to achieve 60 FPS animations.
- Implemented comprehensive site-to-app and in-app click-stream tracking to better understand user behavior and the customer acquisition funnel.
- Maintained an aggressive 2-week release cycle for a quick response to implicit and explicit customer feedback.
- Earned a high degree of customer satisfaction per NPS and product-market fit surveys, even unsolicited user feedback.
- Collected more than 2500 user-contributed songs.

Intellinote / BroadSoft / Cisco Systems   02 / 2014 – 11 / 2020

3rd non-founder employee of Intellinote, a VC-backed SaaS startup that underwent 2 successful exits by acquisition, first by BroadSoft and subsequently by Cisco Systems. (Successive positions described chronologically below.)

Primary Tech: Java, Spring, Hibernate, PostgreSQL, Elasticsearch, JavaScript, TypeScript, Node.js, Express.js, React, iOS/Swift, Android/Java, Electron.js, RabbitMQ/AMQP, SQL, nginx, Docker, Kubernetes, REST, Swagger, AWS, Linux, Webpack, Groovy, Jira, Jenkins (All); TCL, C/C++, Kafka, SIP, VoIP, PBX, XSI, BroadWorks XSP, Cucumber (BroadSoft); Scala, Python, Grafana, Splunk, Redis, MongoDB, Selenium, GCP (Cisco).

... Vice President, Engineering - Intellinote   02 / 2014 – 06 / 2016

Architect, engineering and operations lead for this team collaboration solution offering meetings, calling, chat, document collaboration and team/task management features for mobile, desktop, web and API clients.
  - Recruited and managed globally-sourced team of 24 responsible for all technical aspects of the platform: design, development, operations, and support.
  - Directed feature design, implementation, and deployment across iOS, Android, Windows, macOS and web.
  - Architected 12+ microservices defining the SaaS platform.
  - Designed, built, and operated containerized cloud infrastructure.
  - Created automated build/test/deploy process for integration, staging, and production environments.
  - Developed public-facing REST API and 3rd-party integration strategy; grew to 60+ integrations.
  - Key technical contributor to sales, business development, and acquisition processes.

... Director, Engineering - BroadSoft   06 / 2016 – 03 / 2018

In 2016, Intellinote was [acquired by BroadSoft](), a telecommunications infrastructure giant powering 25 of the world's 30 largest telephony service providers. Rebranded as [*BroadSoft Team-One*](), Intellinote became a cornerstone of BroadSoft's product portfolio.
  - Integrated BroadSoft's messaging, calling, and meeting services.
  - Implemented white-label branding strategy and multi-tenant system administration platform for Team-One.
  - Led 18-month, multi-scrum effort to migrate the market-leading telecom, thousands of their business-customers and millions of end-users to a Team-One-based unified communications (UC) platform.

... Architect, Engineering - Cisco Systems   03 / 2018 – 11 / 2020

BroadSoft was [acquired by Cisco]() in 2018. The Team-One team remained intact, embedded within Cisco's Collaboration (*WebEx Teams*) unit. In addition to developing both client-side and server-side features for WebEx Teams, we continued to manage, monitor and operate the Team-One service and provide tier 2+ customer support.
  - Delivered white-label UC platform to 2 world-class telecoms that even post-acquisition preferred the technically "sunset" Team-One solution.
  - Managed team thru transition to WebEx Teams feature development.

Society for Human Resource Management   02 / 2008 – 11 / 2014

Progressive advancement within the information technology leadership of this 300,000+ member, 600+ chapter professional membership organization. (Specific roles listed independently below.)

Primary Tech: Microsoft Sharepoint, ASP.NET, C#, JavaScript, MS SQL Server, SQL, MS IIS, Magento, Adobe Premiere.

... Director, Technology Strategy & Architecture   01 / 2010 – 01 / 2014

Led team of 5 to identify strategic challenges and opportunities, and ensure that the organization's people and systems were ready to meet them. Defined standards and practices. Articulated sourcing strategy. Managed technology roadmap. Identified and evangelized innovative solutions, and cultivated cross-organizational partnerships to realize them.
  - Designed and implemented a staged-gate portfolio management process.
  - Developed *Global Enterprise Technology Strategy* addressing vision, governance, and implementation.
  - Spearheaded adoption of ITSM/ITIL service management framework.
  - Led selection process for new CMS and e-commerce platforms.
  - Chaired cross-functional committee to articulate the mobile strategy.
  - Technical lead for *Conference Innovation Team*, re-imagining SHRM's significant in-person conference business in light of emerging mobile/social technology trends.

... Director, Internet Operations & User Experience   02 / 2008 – 01 / 2010

Led team of 12 graphic designers, software engineers and multimedia producers building member-facing products and services including web, e-commerce and audio/video content production.
  - Delivered 4 major systems in 16 months: *SHRM Online*, the *SHRM Connect* social network, *SHRM India Online*, and a multi-tenant web platform supporting 500+ affiliated local chapters.
  - Introduced multivariate (A/B) testing, campaign tracking, and acquisition funnel analysis processes. Modernized behavioral analytics program.
  - Developed and executed a 10-point search engine optimization (SEO) plan, yielding a 30% year-over-year increase in organic search traffic.

Director, Product Development - Envictus   07 / 2007 – 02 / 2008

Led a cross-functional team of 14 writers, designers, engineers, and curriculum specialists in full-lifecycle product development for an innovative e-learning startup that measurably improved college readiness for American high school students.

Primary Tech: Java, JavaScript, HTML5/CSAS, Python, Django, SQL, MySQL, nginx, Linux, XML, SCORM.

  - Established project and product management process.
  - Achieved 8x expansion of curriculum by delivering 38 SCORM-compliant e-learning modules in less than 90 days.
  - Collaborated with founders on business strategy.

Encyclopedia Britannica   03 / 1999 – 07 / 2007

Aggressive growth in responsibility and strategic role at this venerable and surprisingly innovative multimedia, multi-platform educational publisher. (Specific roles listed independently below.)

Primary Tech: Java, Apache Struts, Java Swing, XML, XSLT, SGML, SQL, Oracle, PL/SQL, Elasticsearch, Apache Lucene, JavaScript, Objective-C, Swift, C/C++, Apache Web Server, Redis, Squid Cache, JUnit, JMeter, Apache Maven, Apache Ant, UNIX/Linux, COBOL, AS/400, Sage ERP.

… *Executive Director, Strategic Product Development*   03 / 2007 – 07 / 2007

Led "skunk-works"-inspired cross-functional team to develop new product concepts and strategic opportunities. Championed strategically significant products and features both internally and externally.
- Delivered 19 new product proposals and 5 functional prototypes in 90 days.
- Increased user-contributions by 18% via workflow and UX redesign.

… *Director, Product Technology*   01 / 2004 – 03 / 2007

Led team of 23 designers, producers and engineers developing digital products serving consumer, K-12, university and library markets in the US and abroad. Managed design, development and maintenance of a growing stable of web, desktop, mobile, content management, business analytic and e-commerce systems. Collaborated with senior executives to develop and present product strategy to the Board of Directors. Performed competitive analysis. Developed product roadmap. Partnered with domestic and international editorial, marketing, business development and operations teams in a dynamic, matrix-driven organization to define and deliver on product strategy.
- Delivered many award-winning educational products, including: *Learning Magazine*'s "Teachers' Choice for the Classroom" (2006, 2007) and "…for the Family" (2008); SIIA's "Best Educational Reference" (2008), "Best Online Reference Service" (2005) and Best "Online Consumer Information Service" (2005) CODiEs; "Parent's Choice Award" (2004, 2007, 2008); AEP's "Distinguished Achievement Award" (2004, 2007) and "Global Learning Initiative Award" (2005).
- Localized product line for Australia, China, France, India, Japan and the UK.
- Reduced product development costs (by 66% year-over-year) and schedule (42% shorter, y-o-y), while increasing quality (38% fewer defects y-o-y) improving customer satisfaction (net promoter score up 30%).
- Doubled year-over-year organic search traffic via SEO initiatives.
- Introduced process improvements yielding 4x increase in release frequency.
- Re-recruited 3 "boomerang" employees (staff returning to join my team).

… *Director, Systems Architecture*   05 / 2000 – 01 / 2004

Led team of 5 defining the software architecture supporting 25+ products in multiple languages on diverse platforms. Installed and managed project management process.
- Coached 3 direct reports into promotion to peer-level leadership positions.
- Saved $500,000 by leveraging a legacy accounting platform to create a consumer subscription management service.
- Introduced continuous integration and test automation practices.
- Established an agile project management methodology. Scaled pilot process to a company standard that continued to be successfully applied for 12+ years.

… *Senior Software Engineer*   04 /1999 – 05 / 2000

Technical lead in the full life-cycle, full-stack development of web publishing and content management systems.
- Handpicked by CTO to lead performance and scalability improvement initiatives. Increased system capacity by 10x in just 6 weeks. Installed repeatable performance testing and monitoring processes.
- Designed and built a sophisticated custom content management system. Delivered 60 days ahead of schedule. This CMS continued to be used more than 15 years after its initial release.

Bachelor of Arts in Mathematics - Bard College, Annadale NY

Top-tier liberal arts college located in upstate New York.

Bachelor's Thesis: "The Matching Model for Routing Permutations on Graphs", an analysis of parallel computation under various graph topologies.

Awards:
- *Sara Gelbart Prize in Mathematics*
- *Dr. Gustave Aufricht Memorial Scholarship*
- *Distinguished Science Scholarship* (4-year, full tuition scholarship)
- *National Merit Scholarship*

RELATED EXPERIENCE

Management Committee - Apache Software Foundation   1997 – 2007

Contributor, committer and management committee member of this legendary open source software foundation.
- Co-founder of Apache Commons, Apache Incubator and Apache DB projects.
- Initial author of Apache Commons Pool, DBCP, Functor, and Logging libraries.
- Architect and primary contributor to HTTP Client v2 (now HttpComponents).
- Minor contributions to Apache Tomcat, Apache Struts, Xerces/Xalan and the Apache Commons VFS, Collections, Lang, and JEXL components, and others.

Co-founder, Architect - Axion Database Project   2003 – 2005

Architect of and primary contributor to AxionDB, a high-performance, ACID-compliant, SQL99-compatible, JDBC-based open-source relational database that supported customer-facing products from both Encyclopedia Britannica and Sun Microsystems for over a decade. Axion was highlighted as a notable "program to read" on the venerable C2 wiki.

SOME PUBLIC-FACING WORK SAMPLES

Swagger DSL
- Author-centric Domain-Specific Language for creating Swagger/OpenAPI format REST API documentation.
- Live Demo: http://intellinote.github.io/swagger-dsl/demo/live.html
- Source Code: https://github.com/intellinote/swagger-dsl

Stew
- Browser and Node.js-friendly JavaScript library that adds regular expression support to the standard CSS selectors.
- Source Code: https://github.com/rodw/stew

The Graphviz Cookbook
- A practical guide to the Graphviz graph processing and visualization toolset.
- Sample Chapters: http://heyrod.com/projects/gv-cookbook.html

Intellinote Client
- JavaScript SDK for consuming the (now retired) public-facing Intellinote REST API.
- Source Code: https://github.com/intellinote/intellinote-client

FATpick
- Electron-based smart guitar tablature player with real-time pitch and rhythm feedback as you play along.
- Download: https://www.fatpick.com/get

NOTABLE TECHNICAL SKILLS AND EXPERTISE

PLATFORMS & ENVIRONMENTS
- Server / Cloud / Microservice
- API (REST, JSON, XML)
- Web (HTML5/JS/CSS, SPA)
- Desktop (Electron, Java, Native)
- Mobile (iOS, Android, Web)

PROCESS TOOLS
- Jira
- Jenkins
- Confluence
- PagerDuty

TEST FRAMEWORKS
- JMeter
- JUnit
- Mocha.js
- Selenium
- Cucumber
- WebDriver
- Postman

OTHER APPS & SERVICES
- nginx
- Apache Web Server (httpd)
- Kafka
- Grafana
- Splunk
- HAProxy
- RabbitMQ / AMQP
- Swagger / OpenAPI
- Elasticsearch / Lucene
- MailChimp
- Recurly
- Stripe

PROGRAMMING LANGUAGES
- JavaScript
- TypeScript
- Java
- Scala
- Python
- SQL, PL/SQL
- Shell (bash, zsh, sh)
- Ruby
- CoffeeScript
- C, C++, C#
- Swift
- Kotlin
- Groovy
- HTML5, CSS
- XML, XSLT, SGML

DATABASES
- PostgreSQL
- Redis
- MongoDB
- MySQL
- Oracle

TELEPHONY PROTOCOLS
- SIP
- VoIP
- XSI
- PBX
- WebRTC
- XMPP

LIBRARIES & FRAMEWORKS
- Express.js
- React / React Native
- Spring / Spring Boot
- Electron.js
- Hibernate
- Tone.js
- Web Audio
- Web Components
- Django
- Sinatra
- Rails
- Dust.js
- Java Swing

CLOUD INFRASTRUCTURE
- Docker
- Kubernetes
- AWS (EC2, SES, S3, etc.)
- GCP
- Chef
- Linux / UNIX

SPECIAL INTERESTS
- API Design
- Microservice / Cloud Architecture
- Data Modelling; Schema Design
- Developer Experience / Relations
- Process Automation
- Performance Optimization
- System / Service Governance
- Behavioral Modeling & Analytics