

James Rundquist

ENGINEERING LEADER · DEVELOPER PLATFORMS, TOOLING & AGENTIC AI

San Francisco, CA | james.k.rundquist@gmail.com | linkedin.com/in/jamesrundquist | jamesrundquist.com

Engineering leader with **15+ years in software and a decade running engineering teams** at Waymo, Google [X], and Nest. Expert in developer experience, agentic AI tooling, and system architecture across autonomous vehicles, robotics, and IoT, with a proven track record of scaling and mentoring distributed teams. I like making complex systems understandable, and I've done it at every layer: pushing what a platform could render at Everyday Robots, building hardware UIs people enjoyed using at Nest, and giving Waymo engineers a clear enough picture of the Driver to make the right launch call.

EXPERIENCE

Waymo / Senior Staff Technical Lead Manager (L7) · Head of SimHub

Sept 2023 – Present

Global leader in autonomous vehicle technology.

- Head SimHub, the tools Waymo engineers use to see how the Driver is performing, find what to work on, and get launches approved. Grew a flat team of six into a **10-person, three-pillar org across four sites** (SF, Mountain View, New York, Seattle), including a tech lead manager promoted from within.
- Scaled the unified performance analytics and reporting platform to **1,400+ monthly active engineers**, over 60% of whom return multiple days per week, with roughly **2M annualized page views**, serving critical workflows across Perception, Behavior and Planner, Systems Engineering, and Data Science.
- Unified company-wide performance analysis onto one platform, replacing fragmented legacy tools. It standardized the process (adoption from **0% to over 85%**), eliminated **45+ engineer-years** of manual analysis a year, and captured the underlying data, making internal meta-analysis possible for the first time.
- Own the launches platform, where engineers make the case for a release and the launch committee approves it. Grew its coverage of launches **nearly 5x year over year** as it became the system of record for launch review.
- Wrote the org's agentic AI strategy and built the shared artifact store underneath it, so agents and conventional tools work from the same state and context follows developers between tools. Given how critical the tooling is, agents suggest rather than act, and each one has evals to back it.
- Partner with directors and cross-functional leadership across engineering, product, and UX through annual planning: driving headcount and resource allocation, negotiating roadmap trade-offs across competing safety, ML, and infrastructure priorities, and setting long-term platform architecture and reliability commitments.
- Ran recurring cross-org platform summits, bringing **30+ senior stakeholders** across ML, behavior, infrastructure, and product outside my reporting line into agreement on shared evaluation primitives and a multi-year developer velocity roadmap.

Google [X] / Everyday Robots / Senior Staff Software Engineer and Manager

Aug 2017 – Apr 2023

Google X moonshot building an AI-driven general-purpose robot; wound down in 2023.

- Built the team from zero to six engineers with three tech leads, distributed across sites, owning robot visualization, human-in-the-loop interfaces, data management tooling, and internal developer tools.
- Promoted two engineers into technical leadership roles.
- Set organization-level goals, owned the technical roadmap, and made the resourcing case for the team through annual planning.
- Designed and led development of a web-based robot visualization suite enabling real-time rendering of complex data types.
- Drove "Better Engineering" investment: automated Kubernetes deployment tooling, typesafe WebGL shaders, a declarative 3D visualization library, and an automated gRPC-to-HTTP service bridge; delivered a **70x speedup** in protobuf deserialization.

EXPERIENCE (continued)

Nest / Senior Software Engineer, Technical Lead

Aug 2013 – Aug 2017

Smart home IoT company; acquired by Google in 2014.

- Technical lead for web applications serving **2M+ monthly active users**.
- Built a cross-platform reactive UI system (iOS, Android, web) that enabled third-party device integrations.
- Influenced leadership to restructure the team, improving resource allocation against fluctuating demand.
- Owned technical transition planning onto Google's stack following the acquisition.

CourseShark / Founder and CEO

Aug 2010 – Aug 2013

College course scheduling and recruiting platform. Flashpoint Accelerator, Cohort #2 (2012).

- Founded and led the company while completing a CS degree at Georgia Tech; scaled to **100k+ students across 13 schools**.
- Built and scaled the platform on MongoDB, Node.js, and Backbone.js.
- Pitched venture capital firms and angel investors.
- Pivoted the business to recruiters as the buyer after discovering where the value actually sat.

LEADERSHIP

- A decade of engineering management. Currently a 10-person org across three pillars and four sites, run through three pillar leads (one of them a tech lead manager), with substantial influence beyond direct reporting lines.
- Built the leadership bench: five reports promoted into leadership across Everyday Robots and Waymo, one of them into a tech lead manager role, plus internal site expansion and succession coverage across core technical domains.
- Headcount and resource planning with director-level stakeholders; charter definition and org design; staffing through external hiring and negotiated internal mobility.
- Onboarding, performance management, and career and technical coaching.

PRODUCTS

Inkwell `inkwell.app`. Free, local-first screenplay editor for macOS with Quill, a paid AI writing partner that suggests but never writes for you: every change is a diff to accept or reject. Inkwell Reader on iPhone opens scripts and sides, with end-to-end encrypted sync between the two. Built end to end with coding agents.

rundquist.tech. Independent and open-source work in agentic AI tooling, games, and advanced web applications.

SKILLS & TECHNOLOGY

LEADERSHIP	Engineering Leadership · Org Design · Headcount & Resource Planning · Team Scaling & Mentorship · Cross-Functional Leadership
DOMAINS	Developer Experience · Platform Engineering · Simulation & Performance Analytics · Launch Governance · Agentic AI Systems & Strategy · System Architecture · API Design · CI/CD & Build Systems · Web Performance & Reliability · Observability · Robotics · IoT
AGENTIC AI	Agent orchestration · Multi-agent workflows · Eval design · Context engineering · MCP servers, skills & tools · Human-in-the-loop design
AGENT TOOLS	Claude Code · Antigravity · Gemini CLI · Pydantic AI · LangGraph · MCP
TECHNOLOGY	TypeScript · React · Next.js · Node.js · Three.js / WebGL · Swift · Go · C++ · Python · gRPC · Kubernetes · Google Cloud · AWS · WebRTC · WebAssembly · WebSockets · TensorFlow · AI/ML & LLM Development

EDUCATION

BS Computer Science, Georgia Institute of Technology. Specialization in Artificial Intelligence and Human-Computer Interaction

May 2013