

JEFFREY W. SMALL

VP Engineering | Product & Full-Stack Engineering | Multi-Agent AI Platforms | LLM Systems | Talkmap • Autodesk • Blackboard

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SUMMARY

Engineering executive with over 20 years leading teams and building platforms, with the last 7+ years focused on AI-powered product engineering. At Talkmap, drove much of the product design and front-end architecture of Talkdiscovery, an enterprise conversational intelligence platform built on React 18 that evolved from a structured discovery tool for data scientists into a natural language interface for any business user. Drove requirements, architecture discussions, and delivery of the underlying multi-stage AI pipeline, production multi-agent platform, evaluation infrastructure, and LLM observability. Personally delivered a full suite of CCaaS integrations in a 9-day solo sprint using Claude Code. Earlier at Autodesk, scaled BIM 360 to 100+ engineers generating \$60M in year one, now Autodesk Construction Cloud at \$2.94B in revenue, and ran AutoSketch as a true GM with engineering, product, and sales all reporting directly.

EXPERTISE

Product & UX Leadership — drove much of design thinking for enterprise AI platform; Snagit prototyping; full specification authorship; product direction and requirements synthesis

Frontend Engineering — React 18, TypeScript, Redux, React Query, WebSocket, D3, Recharts, Plotly; Sankey diagrams, heat maps, time-series charts, multi-dimensional filtering

Full-Stack Architecture — NestJS/Node.js API gateway; REST API design (200+ endpoints); Okta SSO/JWT/RBAC; multi-tenant SaaS; GitLab CI/CD

Multi-Agent AI Platforms — supervisor patterns, agent graphs, tool orchestration, Agno (LangGraph-equivalent), Temporal workflow orchestration

LLM Integration & Orchestration — multi-model pipeline integration (BERT, Llama-3, Gemini); prompt engineering, model routing, RAG pipelines; OpenAI embeddings

Evaluation & Observability — gold standard datasets, regression harnesses, prompt review gates; Arize Phoenix, Prometheus, Grafana, MLflow, Sentry; SOC 2 Type II

Data & Infrastructure — Kafka/MSK, Kubernetes/EKS, PostgreSQL (Aurora), ClickHouse, Redis, LanceDB, S3, Go, Python, TypeScript, Java

Engineering Leadership — scaling organizations to 100+ engineers through reassignment, acquires, and direct hiring; ownership culture; team development and mentorship

EXPERIENCE

VP of Engineering — Talkmap | *September 2018–Present*

- Drove much of the product design and front-end architecture for Talkdiscovery, an enterprise conversational intelligence platform giving customers their first window into millions of customer conversations. Built on React 18 with real-time updates, interactive visualizations, and multi-dimensional filtering; designed UX from prototype to specification.
- Evolved the platform from a structured discovery tool for data scientists into a natural language interface for any business user, where questions in plain language automatically generated relevant attribute data and discoverable results.
- Drove requirements, architecture discussions, and delivery of a multi-stage AI pipeline combining classical ML (BERT-based intent classification, CRF entity extraction, dialogue act tagging) with LLM-based reasoning, processing millions of enterprise conversations at 99.9% SLA.
- Drove requirements and delivery of Nereus, a production multi-agent AI platform using supervisor pattern architecture, RAG with LanceDB, Agno framework, and Temporal orchestration.
- Drove requirements and delivery of a comprehensive evaluation framework (gold standard datasets, regression harnesses, prompt review gates) and full observability layer (Arize Phoenix, Prometheus, Grafana, MLflow, Sentry).
- Personally delivered Talkmap Connect, a full suite of CCaaS platform integrations, in a solo 9-day sprint using Claude Code at a critical company inflection point.
- Employed feature switches and A/B testing for gradual rollouts; maintained 99.9% SLA across 15 microservices; achieved SOC 2 Type II compliance.

Chief Technology Officer — Motimatic | *September 2017–September 2018*

- Led technology strategy for data-driven advertising platform combining behavioral science with analytics; stabilized analytics pipelines and eliminated systemic data quality issues; introduced agile delivery practices.

Senior Director of Engineering — Blackboard | *May 2015–August 2017*

- Scaled engineering organization from 2 to 15 Scrum teams (~100 engineers) across U.S. and APAC; modernized engineering practices for flagship Learn LMS platform serving universities and K-12 institutions globally.

Director of Engineering — Autodesk — BIM 360 | *July 2010–April 2015*

- Scaled engineering to 100+ engineers through reassignment, acquires, and direct hiring; introduced Agile and Google-grade testing discipline across the full org.

- Focused go-to-market on enterprise construction companies (\$200M+ annual revenue), generating \$60M in year one. Platform evolved into Autodesk Construction Cloud at \$2.94B in revenue.

Senior Director of Technology — PDI Ninth House | *May 2005–June 2010*

- Led technology strategy and engineering for an enterprise eLearning SaaS platform serving Fortune 500 clients, delivering online leadership development and talent management solutions at scale.

Senior Software Architect — Kivera | *March 2004–April 2005*

- Served as principal architect for web and early mobile platforms including location-based and real-time systems. Guided teams delivering traffic, fleet-tracking, and time-sensitive information services; helped secure major commercial partnerships.

Director of Software Engineering — ProcurePoint, Inc. | *March 2002–March 2004*

- Provided engineering leadership for a Sequoia Capital-backed enterprise travel procurement SaaS platform serving Fortune 500 customers. Led teams responsible for a hosted, mission-critical application built on J2EE, Oracle, and BEA WebLogic; focused on architecture, delivery discipline, and enterprise-grade reliability.

Senior Software Architect — NearSpace, Inc. | *June 1999–March 2002*

- Served as principal architect at an Autodesk founder-backed startup focused on time- and location-aware information services for web and early mobile devices (Pocket PC, Palm OS). Guided design and delivery of platforms while working with small, fast-moving teams to meet aggressive launch timelines.

Chief Engineer / Senior Software Engineer — Autodesk — AutoCAD LT | *February 1994–February 1999*

- Led engineering teams responsible for multiple releases of AutoCAD LT, growing revenue from \$15M to \$72M. Conceived and developed the AutoCAD Layouts feature, significantly extending Paper Space functionality. Named inventor on patent for Multiple Output Device Association.

General Manager & Chief Engineer — AutoSketch — Autodesk | *February 1985–February 1994*

- Volunteered to take over founder-written 2D CAD codebase as sole developer; grew to a 13-person team with engineering, technical publications, and marketing/sales all reporting directly, true GM with full P&L; ownership. Grew AutoSketch to Autodesk's second-highest revenue product over 4 years.

PERSONAL PROJECTS

eHouseManual — Home Maintenance AI Platform | *2025–Present*

- Built a complete home maintenance management platform (Next.js, Supabase, Cloudinary, Vercel) as an AI vibe-coding experiment using Claude; working prototype built in a single weekend; continuing as a side project.

EDUCATION

B.A. Applied Mathematics, University of California, Berkeley

PATENTS

Multiple Output Device Association — Autodesk, Inc. | US 7,366,980 | Issued April 29, 2008