

Keith Steward, Ph.D.

Senior Director, AI Engineering | Agentic Workflow Platform Leader

Boston, MA | 508-318-8035 | keith.steward@gmail.com | LinkedIn | IntelligentDataWorks.ai | Résumé Link

PROFILE

Senior AI engineering leader and hands-on builder who turns prioritized AI portfolios into governed production workflows spanning agents, retrieval, orchestration, tools, APIs, and enterprise data. Architected the reusable AssistX foundation and led an 11-engineer team that delivered a production generative AI platform in approximately eight months with 99.9% availability. Combines platform architecture, data engineering, evaluation, observability, privacy, and cross-functional delivery with executive communication and measurable operating outcomes. Builds portable AI capabilities that teams can adopt, maintain, and improve without sacrificing quality, cost control, or responsible use.

AREAS OF EXPERTISE

Production AI: agentic workflows · skills and context engineering · orchestration · retrieval · tool integration

AI Platform Engineering: reusable services · APIs · data pipelines · portability · cost controls

Quality & Governance: evaluation · observability · privacy · auditability · human oversight

Builder Leadership: team development · technical standards · Agile delivery · cross-team accountability

Business Enablement: workflow redesign · adoption · measurable outcomes · executive communication

SELECTED CAREER HIGHLIGHTS

- Delivered the initial production AssistX platform in approximately eight months and sustained 99.9% availability while balancing security, maintainability, and rapid iteration.
- Delivered MassMutual's first cloud-native privacy-rights platform in eight months, automating approximately 90% of a formerly manual regulated workflow.
- Advised more than 200 AWS enterprise customers on AI/ML, data, analytics, and production architecture while preparing 180+ Solution Architects for customer delivery.
- Delivered TriMark's first AWS data lake across 11 divisional ERP systems, reducing cross-enterprise reporting from roughly two months to one day.
- Built an AWS Data Lake Accelerator hands-on, then led 18 engineers through product completion and enterprise customer demonstrations.

PROFESSIONAL EXPERIENCE

Technical Co-Founder & CEO | *Intelligent DataWorks* | Boston, MA | Aug 2023 to Oct 2026

Owned AI strategy, architecture, product direction, engineering, hiring, budget, delivery, and operations for a reusable generative AI platform and vertical workflow application.

- Personally architected the AssistX core, built approximately 75% of the initial application, and led an 11-engineer Agile team through production releases on AWS.
- Designed a portable, composable platform using Python, FastAPI, PostgreSQL/PGVector, LLM APIs, RAG, LangChain, LangGraph, agents, REST APIs, MCP services, workflow orchestration, and AWS CDK.
- Established prompt versioning, model flexibility, structural and LLM-as-judge evaluations, synthetic-data testing, prompt-injection screening, human review, observability, and cost controls.
- Partnered with Marketing to build an AI-driven drip campaign system integrated with SuiteCRM, Hunter.io, and SendGrid, connecting workflow automation with commercial operations.
- Built the company and platform, then deliberately transitioned from entrepreneurship back into long-term senior AI leadership.

Sr. Director of Engineering | *SuccessKPI* | Chantilly, VA | Jun 2022 to Aug 2023

Led architecture, engineering, and delivery of a new Workforce Management capability within an AI-powered, AWS-based contact-center analytics SaaS platform.

- Recruited, coached, and managed eight engineers and one manager across a distributed team; owned performance reviews, compensation input, delivery planning, architecture, and stakeholder updates.
- Directed forecasting, scheduling, optimization, analytics, and platform integrations using Python, linear programming, Amazon S3, Aurora PostgreSQL, and enterprise CCaaS platforms.
- Delivered the initial production platform within 14 months for four customers, including two U.S. government departments, while operating within FedRAMP-informed requirements.

Senior Director, Data Analytics & Operations | *TriMark USA* | Mansfield, MA | Aug 2021 to May 2022

Modernized data and analytics for a \$1B+ enterprise with 11 acquired divisions and heterogeneous ERP systems.

- Defined the enterprise data strategy, secured executive support, prioritized 50+ business use cases, and grew an initial four-person analytics team into a seven-member AWS engineering organization.
- Delivered a 3 TB AWS data lake within 10 months using Glue, PySpark, S3, JDBC, and AWS CDK to ingest, catalog, consolidate, and normalize data across all 11 ERPs.
- Enabled consolidated analytics for finance, supply chain, sales, marketing, and operations while improving reporting turnaround by approximately 60x.

Engineering Lead, Cloud Data Privacy & AI Governance | *MassMutual* | Boston, MA | Nov 2020 to Aug 2021

Established cloud-native engineering patterns for enterprise privacy, AI governance, and responsible AI initiatives in insurance and financial services.

- Directed architecture and hands-on implementation for privacy-rights management while guiding enterprise data catalog, adaptive-policy, permissible-use, and governance API initiatives.
- Partnered with enterprise architecture, security, and site reliability teams on AWS, IAM, serverless, integration, and CI/CD patterns that translated policy into practical controls.
- Advised AI Governance & Ethics leaders on model transparency, bias detection, drift monitoring, auditability, and lifecycle oversight using Amazon SageMaker.

Vice President, AI/ML | *NorthBay Solutions* | Andover, MA | Jan 2019 to Nov 2020 (Role ended in company-wide COVID layoff).

Recruited from AWS by the CEO to establish the firm's enterprise AI consulting practice and expand its cloud, data, and machine-learning portfolio.

- Won CEO approval for a reusable Data Lake Accelerator, built the initial full-stack system hands-on, and led 18 offshore engineers through product completion and customer demonstrations.
- Advised enterprise clients including Dun & Bradstreet, Harvard Business School, 1091 Media, and Invesco on data strategy, AI/ML architecture, and AWS production delivery.
- Combined executive advisory, product management, reusable architectures, and hands-on implementation to expand repeatable enterprise AI and analytics offerings.

Sr. Specialist Solutions Architect, AI/ML and Big Data/Analytics | *Amazon Web Services* | Boston, MA | May 2015 to Dec 2018

Served as AWS's first Senior Specialist Solutions Architect for AI/ML after leading Big Data and Analytics specialization during early enterprise adoption of EMR and SageMaker.

- Advised 200+ customers across financial services, healthcare, telecommunications, manufacturing, and technology on AI/ML, data lakes, analytics, governance, and production cloud architectures.
- Founded and led 100-member Big Data/Analytics and 80-member AI/ML technical communities; developed enablement, demonstrations, workshops, and onboarding for new services.
- Delivered 36 invited presentations, contributed to two AWS specialty certification exams, tested emerging services, and brought customer feedback to product teams.

PATENTS, RECOGNITION & EDUCATION

Patents: U.S. Patents 8,793,073 and 8,489,334; BioWizard Intelligent Agent Architecture patent application.

Recognition: AWS ML Elite Gold · AWS ML Elite Platinum · AWS re:Invent Rockstar · AWS Certification SME.

Education: Ph.D., Molecular Biology / Microbiology & Immunology; Hon. B.Sc., Microbiology & Immunology — University of Western Ontario. Canadian Medical Research Council Post-Doctoral Research Fellowship.

TECHNOLOGIES

Generative AI · AI agents · RAG · LangChain · LangGraph · Model Context Protocol (MCP) · LLM evaluation · Observability · Python · FastAPI · REST APIs · PostgreSQL · PGVector · SQL · Data pipelines · AWS · Amazon SageMaker · AWS CDK · CI/CD · Docker · Kubernetes · Git · SuiteCRM · SendGrid · Apache Spark