

Keith Steward, Ph.D.

Principal Enterprise AI Architect | Hands-On Cloud & Integration Engineer

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[LinkedIn](#) | [IntelligentDataWorks.ai](#) | [IDW LinkedIn](#)

PROFILE

Hands-on enterprise AI and systems architect who turns complex modernization mandates into secure, supportable platforms. Combines software architecture, AI/ML systems, MLOps, data pipelines, APIs, cloud migration, containers, integration, evaluation, reliability, and governance with deep AWS delivery. Architected AssistX, supporting 70+ production automations across 20+ workflows, and delivered its first release in eight months. Brings the technical judgment to define reference patterns, test emerging approaches, mentor senior engineers, and carry architecture decisions through production operations.

CORE EXPERTISE

- **Enterprise Architecture:** technical baselines, roadmaps, reference patterns, modernization, APIs, integration, interoperability, and design governance
- **AI/ML Systems:** solution patterns, MLOps, model lifecycle, evaluation, risk controls, RAG, agents, data pipelines, and production operations
- **Cloud & Platform Engineering:** AWS, containers, distributed systems, security-by-design, performance, reliability, CI/CD, and observability
- **Technical Authority:** architecture reviews, change controls, PoCs, technology assessments, engineering standards, mentoring, and stakeholder alignment

PROFESSIONAL EXPERIENCE

Technical Co-Founder | Intelligent DataWorks | Boston, MA | Aug 2023 to Present

Own hands-on architecture and engineering for an applied AI platform from reference patterns through production operations.

- Architected and helped build AssistX using Python, FastAPI, PostgreSQL/PgVector, LLMs, RAG, AI agents, LangChain, LangGraph, APIs, workflow orchestration, containers, and AWS services.
- Delivered the first production release within eight months; the platform now supports 70+ AI automations across more than 20 workflows and accelerates selected work by up to 50x.
- Defined reusable architecture patterns and controls for model selection, evaluation, prompt safety, input validation, data isolation, human review, observability, cost management, and multi-tenant delivery.
- Built and deployed a Bedrock AgentCore agent with Strands and AWS CDK, while contributing directly to backend services, cloud infrastructure, integration, security, testing, deployment automation, performance analysis, reliability controls, and sustained production operations.
- Initiated strategic acquisition discussions regarding IDW's AI platform as part of a planned transition to a senior technical operating role.

Senior Director of Engineering | SuccessKPI | Remote | Jun 2022 to Aug 2023

Directed architecture and production delivery for an AWS-based workforce-management SaaS platform while remaining close to implementation.

- Translated requirements into cloud architecture, algorithms, Python services, APIs, data flows, work breakdown, testing, CI/CD, and iterative production releases.
- Delivered forecasting, optimization, scheduling, analytics, and automated communications integrated with major contact-center platforms; shipped the first production release within six months.
- Recruited and mentored a distributed seven-person engineering team while maintaining technical standards, release discipline, reliability, and stakeholder alignment.

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

Owned enterprise data-platform modernization across 11 acquired businesses and heterogeneous ERP environments.

- Defined an AWS data strategy, reference architecture, and delivery roadmap with business and technology leaders across more than 50 prioritized use cases.
- Delivered the company's first AWS data lake within seven months, automating ingest, cataloging, normalization, and distributed querying while reducing reporting from roughly two months to one day.

- Expanded a four-person analytics group into a seven-member engineering and analytics team through hands-on upskilling, architecture guidance, hiring, mentoring, and delivery controls.

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

Established secure AWS architecture and hands-on engineering across five privacy and AI-governance initiatives.

- Led architecture and implementation for privacy rights, enterprise metadata, governance APIs, and policy automation using secure cloud-native integration patterns.
- Advised AI Governance & Ethics on MLOps, model inventory, transparency, bias, drift, monitoring, human oversight, auditability, and SageMaker lifecycle controls.
- Delivered the first cloud-native privacy-rights platform within eight months, automating approximately 90% of a formerly manual regulated workflow.

VP of AI/ML | NorthBay Solutions | Boston, MA | Jan 2019 to Nov 2020 | (Role ended in company-wide COVID layoff).

Recruited out of AWS by the NorthBay Solutions CEO to establish a new AI/ML practice and reusable cloud delivery capability.

- Proposed an AWS Data Lake and ML accelerator, built the initial full-stack platform hands-on, and guided a distributed 24-person team toward demonstrations and commercial delivery.
- Architected enterprise AI, data-lake, knowledge-graph, API, and cloud solutions while coordinating customers, senior engineers, offshore teams, and delivery partners.
- Built Dun & Bradstreet's first AWS Neptune knowledge graph to integrate hierarchical Kmart and Sears business data.

Senior Specialist Solutions Architect, AI/ML & Big Data | Amazon Web Services | Boston, MA | May 2015 to Dec 2018

Served as a technical authority for enterprise AI/ML, distributed-data platforms, cloud architecture, security, and adoption.

- Advised 200+ enterprise customers on AI/ML, data lakes, distributed analytics, APIs, security, performance, reliability, and production AWS architecture.
- Founded global AI/ML and Big Data technical communities, growing the AI/ML community to 80+ specialists through reference assets, reviews, mentoring, workshops, and standards.
- Created 170+ enablement assets, trained 180+ solution architects, contributed to AWS certification exams, and delivered 50+ technical presentations and workshops.

EARLIER ARCHITECTURE EXPERIENCE

- Earlier architecture work includes a fault-tolerant AWS and Cassandra platform at Dimensional Photonics, distributed SaaS engineering at CambridgeSoft, and Ingenuity Pathway Analysis, a commercial bioinformatics knowledge-discovery platform.

EDUCATION & RECOGNITION

Ph.D., Molecular Biology / Microbiology & Immunology, University of Western Ontario. AWS ML Elite Gold and Platinum; AWS re:Invent Rockstar; named inventor on multiple patents.

TECHNOLOGIES

Enterprise architecture • software architecture • reference architectures • system modernization • Generative AI machine learning • LLMs • RAG • AI agents • MLOps • model lifecycle • evaluation • risk controls • data pipelines • AWS Amazon Bedrock • SageMaker • Python • FastAPI • REST APIs • microservices • enterprise integration • distributed systems Docker • Kubernetes • CI/CD • observability • performance engineering • reliability engineering • security-by-design PostgreSQL • PGVector • vector databases • data lakes • knowledge graphs • AWS Neptune • LangChain • LangGraph AWS CDK • Linux • Git • Kafka • API Gateway