

Keith Steward, Ph.D.

Applied AI Architect | Production Agentic Systems

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

PROFILE

Hands-on AI architect who turns emerging models into reliable, production-ready applications and developer workflows. Combines LLMs, RAG, agents, Python, APIs, cloud-native architecture, evaluation, observability, security, and AI-assisted development with technical mentoring and cross-functional delivery. Built the AssistX core platform and helped deliver 70+ AI automations across more than 20 workflows, accelerating selected work by up to 50x. Brings the engineering judgment to move AI initiatives from experimentation through secure, maintainable production operation.

CORE EXPERTISE

Generative AI • LLMs • AI Agents • Agentic Workflows • Python • REST APIs • FastAPI • Data Pipelines • AWS • CI/CD • AI Evaluation • Observability • Security • React • AI-Assisted Development

SELECTED TECHNICAL IMPACT

- Architected and built the AssistX production GenAI platform using LLMs, RAG, agents, Python, FastAPI, PostgreSQL/PGVector, APIs, and AWS.
- Delivered the initial production platform in approximately eight months; it supports 70+ automations across more than 20 workflows and accelerates selected work by up to 50x.
- Implemented evaluation, guardrails, model selection, cost controls, security, observability, and 99.9% availability for an operational AI product.
- Mentored engineers in AI-assisted development; more than half of AssistX was built using code-generation technologies including Codex.

PROFESSIONAL EXPERIENCE

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

Architect and build AI product, platform, and cloud capabilities while guiding engineering execution and operations.

- Built the AssistX core platform hands-on using Python, FastAPI, LLMs, RAG, agents, LangChain/LangGraph, PostgreSQL/PGVector, APIs, Docker, AWS, and CDK.
- Delivered the initial production platform in approximately eight months; 70+ automations span more than 20 workflows and accelerate selected work by up to 50x.
- Implemented AI evaluation, guardrails, model selection, token-cost controls, security, observability, and operational practices supporting 99.9% uptime.
- Mentored 11 engineers in architecture and AI-assisted development; more than half of the product was built with code-generation technologies including Codex.
- Initiated strategic acquisition discussions regarding IDW's AI platform as part of a planned transition to a senior AI/engineering leadership role.

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

Directed architecture and engineering for an AI-powered contact-center Workforce Management SaaS product.

- Recruited and led an 11-person organization including a manager, with responsibility for hiring, coaching, performance reviews, bonus allocation, and a \$600,000 budget.
- Directed Agile delivery across security, data, platform, BI, and quality engineering, translating product priorities into forecasting, optimization, integrations, and releases.
- Delivered an AI-powered workforce-management SaaS product for enterprise and government customers using AWS, Python, PostgreSQL, forecasting, and optimization.

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

Owned enterprise data modernization for a \$1B+ organization integrating 11 acquired businesses and heterogeneous ERP systems.

- Prioritized 50+ analytics use cases with Finance, Marketing, Supply Chain, and technology leaders and secured support for an AWS data strategy.
- Upskilled four analysts and grew the team to seven AWS engineers with hiring, mentoring, planning, budget, risk, and delivery accountability.
- Established nightly data ingestion, cataloging, consolidation, normalization, and global querying across 11 geographically distributed ERP environments.

- Delivered the first AWS data lake within seven months and reduced cross-ERP reporting from roughly two months to one day.

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

Led architecture and hands-on implementation across five enterprise Data Privacy and AI Governance initiatives.

- Converted policy and product requirements into secure cloud architecture, APIs, automated infrastructure, testing, CI/CD, and production releases.
- Delivered the first cloud-native privacy-rights platform within eight months, automating approximately 90% of a manual workflow.
- Partnered with Enterprise Architecture and SRE on IAM, serverless patterns, managed services, infrastructure automation, resilience, and cloud operating standards.
- Guided model-governance practices for evaluation, transparency, bias, drift, monitoring, auditability, lifecycle controls, security, and human oversight.

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 production data-and-ML capability.

- Built an AWS Data Lake and ML accelerator hands-on with Python, Django, React, APIs, and AWS, then directed a 24-person remote team toward delivery.
- Delivered an AWS Neptune knowledge graph integrating complex hierarchical enterprise data and expanded reusable cloud and AI architectures for customers.
- Advised enterprise customers on AI strategy, data platforms, knowledge graphs, solution architecture, and production implementation.

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

Advised enterprises and AWS teams on production machine learning, distributed analytics, data platforms, and cloud adoption.

- Advised 200+ enterprises on AI/ML strategy, production architecture, SageMaker, data lakes, distributed systems, security, and scalable adoption.
- Created and led global Big Data and AI/ML communities, developing 180+ specialists through standards, mentoring, workshops, and reusable assets.
- Built a SageMaker and TensorFlow forecasting hackathon for Morgan Stanley data scientists and created 170+ technical enablement assets.
- Delivered 50+ technical presentations and workshops and earned AWS ML Elite Gold and Platinum recognition.

EARLIER RELEVANT EXPERIENCE

- Built production cloud and software platforms spanning AI, data, regulated applications, customer-facing SaaS, and fault-tolerant operations.
- At Dimensional Photonics, built an AWS/Cassandra platform and integrations for an FDA-cleared connected product with no significant production downtime.

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

AI-powered applications • Generative AI • LLMs • AI agents • agentic workflows • Python • REST APIs • FastAPI • data pipelines • cloud-native architecture • AWS • Amazon Bedrock • SageMaker • RAG • embeddings • vector search • PostgreSQL • PGVector • LangChain • LangGraph • MCP • prompt engineering • AI evaluation • AI guardrails • MLOps • CI/CD • observability • security • Docker • Kubernetes • AWS CDK • microservices • distributed systems • React • SQL • Snowflake • TensorFlow • Git • Linux • AI-assisted development • Codex