

Keith Steward, Ph.D.

Application Modernization & AI Engineering Leader | Cloud-Native Delivery

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PROFILE

Player-coach engineering leader who modernizes enterprise applications while embedding AI-assisted development into secure, measurable delivery practices. Combines cross-functional team leadership with hands-on depth in Python, agentic systems, RAG, MCP, APIs, microservices, event-driven architecture, AWS, CI/CD, quality, and governance. Built and led 11-person engineering teams and a production AI platform supporting 70+ automations across more than 20 workflows with 99.9% availability. Brings disciplined execution to accelerate modernization without sacrificing reliability, security, or human accountability.

SELECTED CAREER HIGHLIGHTS

- Recruited and led 11-person cross-functional engineering organizations spanning software, data, platform, security, BI, and quality delivery.
- Architected and built a production agentic platform using Python, FastAPI, LLMs, RAG, MCP-oriented integrations, PostgreSQL/PGVector, APIs, Docker, AWS, and CDK.
- Established AI-assisted engineering practices, evaluation, testing, guardrails, human approval, CI/CD, observability, security, incident response, and release controls.
- Delivered an AWS enterprise data platform across 11 divisions in seven months, reducing cross-ERP reporting from roughly two months to one day.
- Led five enterprise privacy and AI-governance initiatives spanning cloud architecture, metadata, policy automation, IAM, auditability, APIs, and event-driven systems.

PROFESSIONAL EXPERIENCE

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

Build and operate a production AI platform while owning strategy, architecture, delivery, governance, security, and cloud operations.

- Architected and built the AssistX core platform and first 80% of its initial application hands-on using Python, FastAPI, LLMs, RAG, agents, PostgreSQL/PGVector, APIs, Docker, AWS, and CDK.
- Recruited and technically led 11 engineers while owning a \$900,000 budget, product priorities, architecture, releases, security, and operations.
- Delivered 70+ automations across more than 20 workflows, accelerating selected work by up to 50x and sustaining 99.9% availability.
- Established evaluation, guardrails, human oversight, observability, model routing, cost controls, incident response, and release practices.
- 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

Built and led engineering for an AI-powered workforce-management component of a cloud-native contact-center SaaS platform.

- Recruited and led an 11-person organization, including a manager, spanning software, data, platform, security, BI, and quality engineering.
- Owned Agile execution, architecture, operational priorities, performance reviews, bonus allocation, team capacity, and a \$600,000 budget.
- Delivered forecasting, scheduling, optimization, analytics, APIs, and integrations for enterprise and government customers.

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

Established the enterprise data strategy, engineering team, architecture, roadmap, and operating capability across a fragmented multi-division environment.

- Aligned executives around more than 50 analytics use cases and secured funding for an AWS data-lake strategy and delivery roadmap.
- Upskilled an analytics team with no prior AWS experience and expanded it to seven cloud data engineers.
- Delivered the first enterprise data lake across 11 divisions in seven months, reducing 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.

- Led architecture and engineering across five enterprise Data Privacy and AI Governance initiatives spanning privacy rights, enterprise metadata, policy automation, and governance APIs.
- Advised the AI Governance and Ethics organization on model transparency, bias, drift, ownership, risk classification, monitoring, human oversight, and auditability.
- Established AWS security, IAM, API, event-driven, and CI/CD patterns while coordinating Product, Enterprise Architecture, SRE, governance, and delivery teams.

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 an AWS data-and-ML accelerator hands-on, then directed a 24-person distributed team delivering reusable cloud and AI architectures.
- Led a 25-person engineering organization delivering enterprise scientific and cloud applications through modernization and production release.

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

application modernization • AI-assisted development • agentic engineering • AI agents • RAG • MCP • context engineering • prompt engineering • AI governance • Python • FastAPI • REST APIs • microservices • event-driven architecture • AWS • cloud migration • Docker • Kubernetes • AWS CDK • CI/CD • DevOps • quality engineering • release management • automated testing • Agile delivery • Scrum • risk management • dependency management • security • privacy • IAM • auditability • observability • MLOps • PostgreSQL • PGVector • LangChain • LangGraph • Codex • Claude • Git • Jira • distributed systems