

Keith Steward, Ph.D.

Principal AI & Data Architect | Production Solution Leadership

Boston, MA | 508-318-8035 | keith.steward@gmail.com

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

PROFILE

Hands-on AI and data architect who turns complex business requirements into secure, scalable production platforms across machine learning, analytics, data engineering, and Generative AI. Combines Python, SQL, AWS, Spark, Snowflake, RAG, vector databases, MLOps, APIs, distributed systems, and technical mentoring with full-lifecycle solution ownership. Built the AssistX core and first 80% of its initial application and previously delivered an enterprise data lake across 11 divisions in seven months. Brings practical architecture judgment to improve engineering quality and measurable business outcomes.

CORE TECHNOLOGIES

Python • SQL • AWS • Data Architecture • Data Engineering • Spark • Snowflake • Generative AI • LLMs • RAG • Vector Databases • MLOps • REST APIs • Distributed Systems • AI Evaluation

SELECTED CAREER HIGHLIGHTS

- Architected and built a production Generative AI platform using Python, FastAPI, LLMs, RAG, agents, PostgreSQL/PGVector, APIs, Docker, AWS, and CDK.
- Delivered 70+ AI automations across more than 20 workflows with 99.9% availability and selected work accelerated up to 50x.
- Designed and delivered an AWS enterprise data lake across 11 divisions in seven months, reducing cross-ERP reporting from roughly two months to one day.
- Advised 200+ enterprises on AI, ML, data lakes, Spark/EMR, analytics, distributed systems, security, and production AWS architectures.
- Built reusable data-and-ML accelerators and guided distributed engineers through architecture reviews, implementation, deployment, quality, and production operations.

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 Lake and ML accelerator hands-on with Python, Django, React, APIs, and AWS, then directed a 24-person remote delivery team.
- Developed commercial AI, bioinformatics, and scientific software, including patented knowledge-discovery systems and enterprise cloud products.

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 solution architecture • data architecture • data engineering • data modeling • cloud analytics • Generative AI • LLMs • RAG • vector databases • MLOps • Python • SQL • AWS • Amazon Bedrock • SageMaker • Spark • PySpark • EMR • Snowflake • data lakes • data pipelines • ETL • analytics • machine learning • TensorFlow • FastAPI • REST APIs • distributed systems • microservices • event-driven architecture • PostgreSQL • PGVector • LangChain • LangGraph • AI agents • AI evaluation • Docker • Kubernetes • AWS CDK • CI/CD • security • observability • technical mentoring • Agile delivery