

Keith Steward, Ph.D.

Agentic Systems Architect | Production Multi-Agent Platforms

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

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

PROFILE

Hands-on architect who builds reliable agentic systems that reason, use tools, retain state, and execute complex enterprise workflows. Combines Python, LLMs, RAG, multi-agent orchestration, vector retrieval, APIs, cloud infrastructure, evaluation, observability, security, and responsible-AI controls with technical mentorship. Built the AssistX core platform and helped deliver 70+ AI automations across more than 20 workflows, accelerating selected work by up to 50x. Brings practical judgment to move autonomous AI from experimentation into secure production operation.

CORE EXPERTISE

Agentic AI • Multi-Agent Systems • LLMs • RAG • Python • LangChain • LangGraph • AI Agents • Tool Calling • Memory Management • PGVector • REST APIs • AWS • AI Evaluation • Observability

SELECTED TECHNICAL IMPACT

- Architected and built a production agent platform with LLM reasoning, tool invocation, RAG, memory, state, orchestration, APIs, and human-controlled workflows.
- Implemented 70+ AI automations across more than 20 workflows, with selected processes operating up to 50x faster than manual execution.
- Built evaluation, guardrail, model-selection, token-cost, security, observability, and operational controls supporting 99.9% uptime.
- Mentored 11 engineers in agent architecture and AI-assisted development while remaining hands-on with Python, LangChain, LangGraph, FastAPI, PostgreSQL/PGVector, and AWS.

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.

- Architected and built a production agent platform with LLM reasoning, tool invocation, RAG, memory, state, orchestration, APIs, and human-controlled workflows.
- Implemented 70+ AI automations across more than 20 workflows, with selected processes operating up to 50x faster than manual execution.
- Built evaluation, guardrail, model-selection, token-cost, security, observability, and operational controls supporting 99.9% uptime.
- Mentored 11 engineers in agent architecture and AI-assisted development while remaining hands-on with Python, LangChain, LangGraph, FastAPI, PostgreSQL/PGVector, and AWS.
- 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 AI, data, and cloud systems spanning distributed APIs, enterprise integrations, knowledge graphs, machine learning, and regulated applications.
- At AWS, advised 200+ enterprises on AI/ML and distributed data architecture and developed global technical communities totaling 180+ specialists.

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

Agentic AI • multi-agent systems • LLMs • RAG • AI agents • planning • reasoning • tool calling • memory management • state management • workflow orchestration • LangChain • LangGraph • MCP • Python • FastAPI • REST APIs • microservices • distributed systems • embeddings • vector search • PostgreSQL • PGVector • AWS • Amazon Bedrock • SageMaker • AI evaluation • AI guardrails • responsible AI • AI governance • observability • monitoring • security • Docker • Kubernetes • CI/CD • AWS CDK • TensorFlow • data pipelines • knowledge graphs • human oversight