

Keith Steward, Ph.D.

AI Product Engineer | Applied AI Systems Builder

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

PROFILE

Hands-on AI product engineer who turns ambiguous workflows into reliable production systems using LLMs, agents, RAG, APIs, cloud infrastructure, evaluation, and automation. Architected and helped build a commercial AI platform supporting 70+ automations across 20+ workflows, with selected work accelerated up to 50x. Combines direct implementation with product judgment, model and architecture evaluation, and technical leadership. Experienced in customer-service agents, multimodel orchestration, observability, latency, cost, security, and failure handling on AWS.

SELECTED QUALIFICATIONS

- **Production AI Systems:** LLM applications, agents, RAG, prompt engineering, evaluation, regression testing, observability, latency, cost, reliability, and failure handling
- **End-to-End Product Engineering:** discovery, architecture, rapid prototyping, backend APIs, data integration, deployment, feedback loops, and production operations
- **Agentic Workflows:** tool use, MCP, LangChain, LangGraph, Bedrock AgentCore, Strands, OpenAI and Anthropic models, workflow orchestration, and guardrails
- **Cloud Delivery:** AWS, Python, FastAPI, PostgreSQL/PGVector, Docker, Kubernetes, AWS CDK, CI/CD, security, and scalable platform architecture

TECHNICAL TOOLKIT

Python • FastAPI • AWS • LLMs • OpenAI • Anthropic • AI Agents • RAG • LangChain • LangGraph • MCP • PostgreSQL/PGVector • Docker • Kubernetes • AWS CDK

PROFESSIONAL EXPERIENCE

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

Architect and build production AI software while guiding engineering execution and cloud operations.

- Architected and helped build AssistX, a production AI platform combining Python, FastAPI, PostgreSQL/PGVector, OpenAI and Anthropic models, RAG, AI agents, APIs, LangChain, LangGraph, MCP, workflow orchestration, and AWS services.
- Shipped the first commercial release within eight months; the platform supports 70+ AI automations across more than 20 workflows and accelerates selected work by up to 50x.
- Recruited and technically led an 11-engineer Agile team while coding and contributing directly to architecture, backend services, cloud infrastructure, orchestration, evaluation, security, and platform operations.
- Implemented a customer-service AI agent with AWS Bedrock AgentCore and Strands, deployed to the managed agent runtime using AWS CDK.
- Built evaluation, observability, guardrail, feedback, and failure-handling capabilities for production agentic workflows serving enterprise users.
- 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 a seven-person distributed team delivering forecasting, optimization, scheduling, analytics, and automated communications on AWS.
- Translated product requirements into architecture, algorithms, APIs, testing, CI/CD, operations, and two-week Agile releases.
- Designed forecasting and linear-programming capabilities that converted contact-center demand and staffing constraints into operational schedules.
- Delivered the first working release within six months for two flagship enterprise customers and expanded the platform to additional large organizations.

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.

EARLIER RELEVANT EXPERIENCE

- Built and operated a fault-tolerant AWS/Cassandra platform for an FDA-cleared connected dental product at Dimensional Photonics.
- Built BioWizard, a 400-rule AI system for genomic drug-target evaluation, and helped create the globally adopted Ingenuity Pathway Analysis 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

Python • FastAPI • REST APIs • GraphQL • React • AWS • ECS • EKS • Lambda • AWS CDK • Docker • Kubernetes • CI/CD • PostgreSQL • PGVector • LLMs • OpenAI • Anthropic Claude • Generative AI • AI agents • RAG • MCP • LangChain • LangGraph • Bedrock AgentCore • Strands • prompt engineering • AI evaluation • regression testing • observability • latency optimization • cost optimization • failure handling • guardrails • vector search • workflow orchestration • data pipelines • AI governance • data privacy • security • Linux • Git