

Keith Steward, Ph.D.

AI/ML Solutions Architect | Hands-On Technology Leader

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PROFILE

Hands-on AI/ML solutions architect who converts client challenges into scalable production systems from discovery and estimation through implementation and deployment. Combines Python, TensorFlow, LLMs, generative AI, NLP, MLOps, data engineering, and AWS architecture with practical technical leadership. Built an 11-engineer team and shipped 70+ AI automations across 20+ workflows; advised 200+ AWS enterprises on AI and data adoption. Brings the judgment to select technologies, prototype rapidly, guide cross-functional teams, and deliver secure, governed solutions with measurable outcomes.

SELECTED QUALIFICATIONS

- **AI Solution Delivery:** discovery, estimation, architecture, prototyping, implementation, evaluation, deployment, integration, and operations
- **Hands-On AI Engineering:** production Python, TensorFlow, LLM, RAG, agentic, NLP, vector-search, data-pipeline, and API development
- **Client Consulting:** workshops, technical roadmaps, executive communication, requirements translation, cloud adoption, and delivery planning
- **Technical Leadership:** mentoring engineers, guiding cross-functional teams, architecture reviews, Agile delivery, quality, security, and governance

TECHNICAL TOOLKIT

Python • TensorFlow • Amazon SageMaker • LLMs • Generative AI • NLP • MLOps • LangChain • LangGraph • RAG • AWS • FastAPI • PostgreSQL/PGVector • Docker • Kubernetes

PROFESSIONAL EXPERIENCE

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

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

- Architected and helped build AssistX, a production AI platform combining Python, FastAPI, PostgreSQL/PGVector, LLMs, RAG, AI agents, APIs, LangChain, LangGraph, workflow orchestration, and AWS services.
- Delivered the first commercial release within eight months, supporting 70+ AI automations across more than 20 workflows and accelerating 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.
- 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 • TensorFlow • Amazon SageMaker • LLMs • Generative AI • NLP • computer vision • MLOps • AI evaluation • LangChain • LangGraph • RAG • AI agents • vector search • PostgreSQL • PGVector • FastAPI • REST APIs • data engineering • data pipelines • AWS • AWS CDK • AWS Bedrock AgentCore • Docker • Kubernetes • CI/CD • Spark • EMR • S3 • Glue • Athena • knowledge graphs • AWS Neptune • workflow orchestration • AI governance • data privacy • security • observability • Linux • Git