

Keith Steward, Ph.D.

Machine Learning Engineering Leader | Production ML Systems Builder

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

PROFILE

Hands-on machine learning engineering leader building production ML, AI, and data systems from architecture through deployment and monitoring. Combines Python, SQL, Spark, SageMaker, distributed systems, forecasting, optimization, and cloud delivery with practical team leadership. Led a seven-person team that shipped workforce forecasting and scheduling within six months, then built an 11-engineer organization delivering 70+ production AI automations. Brings the technical judgment to scale ML pipelines, strengthen evaluation, and connect model performance reliably to business outcomes.

SELECTED QUALIFICATIONS

- **Production ML Delivery:** forecasting, optimization, model evaluation, deployment, MLOps, monitoring, and measurable outcomes
- **ML & Data Engineering:** Python, SQL, Spark, SparkML, PySpark, SageMaker, EMR, distributed processing, and data pipelines
- **Engineering Leadership:** recruiting, mentoring, Agile delivery, technical roadmaps, cross-functional partnership, and team development
- **Scalable Platforms:** AWS, high-availability systems, Cassandra, APIs, data lakes, CI/CD, observability, SaaS architecture, and cloud operations

PROFESSIONAL EXPERIENCE

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

Lead product architecture, engineering execution, and operations for an applied AI SaaS company while remaining hands-on in platform development.

- Architected and helped build AssistX, a production AI platform combining Python, FastAPI, PostgreSQL/PGVector, LLMs, AI agents, RAG, APIs, 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 organization while contributing directly to backend services, cloud infrastructure, AI orchestration, evaluation, security, and platform operations.
- Established reusable production foundations for controlled prompts, input validation, prompt-injection protection, vector search, observability, human review, and multi-tenant SaaS delivery.
- Initiated strategic acquisition discussions regarding IDW's AI platform with HR technology companies.

Senior Director of Engineering | SuccessKPI | Remote | Jun 2022 to Aug 2023

Directed engineering and architecture for the Workforce Management component of an AI-powered contact-center analytics SaaS platform.

- Recruited and led a seven-person distributed team delivering ML forecasting, operations-research optimization, scheduling, analytics, visualization, and automated communications on AWS.
- Translated product requirements into cloud architecture, algorithms, data flows, APIs, work breakdown, testing, CI/CD, and iterative production releases.
- Designed forecasting models to predict call volumes and linear-programming workflows to generate staffing schedules for large contact-center operations.
- Delivered the first working production release within six months for two flagship enterprise customers and expanded the platform to additional large organizations while maintaining production quality and operational reliability.

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.

- Defined an AWS data strategy and delivery roadmap with Finance, Marketing, Supply Chain, and technology leaders across more than 50 prioritized analytics use cases.
- Upskilled a four-person analytics group and grew it into a seven-member AWS engineering and analytics function with planning, hiring, mentoring, budget, risk, and delivery accountability.
- Delivered the company's first AWS data lake within seven months, automating nightly ingest, cataloging, normalization, and distributed querying; reduced reporting from roughly two months to one day.

Technical Lead, Cloud Data Privacy & AI Governance | MassMutual | Boston, MA | Nov 2020 to Aug 2021

Established AWS architecture and hands-on engineering across five Data Privacy and AI Governance initiatives.

- Led architecture and implementation for Privacy Rights Management, enterprise metadata, governance APIs, and policy-automation capabilities using secure cloud-native patterns.
- Delivered MassMutual's first cloud-native privacy-rights platform within eight months, automating approximately 90% of a formerly manual workflow.
- Advised AI Governance & Ethics on model evaluation, transparency, bias, drift, monitoring, auditability, lifecycle controls, and SageMaker-based MLOps.

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.

- Proposed an AWS Data Lake and ML accelerator, built the initial full-stack platform hands-on using Python and AWS, and directly led a 24-person remote team toward customer demonstrations.
- Advised and delivered solutions for enterprise customers across ML, distributed analytics, data lakes, knowledge graphs, APIs, and production AWS architecture.

Senior Specialist Solutions Architect, AI/ML & Big Data | Amazon Web Services | Boston, MA | May 2015 to Dec 2018

Advised enterprises and AWS technical teams on production machine learning, distributed analytics, data platforms, and cloud adoption.

- Advised 200+ enterprise customers on ML strategy, SageMaker, TensorFlow, EMR, Spark, data lakes, distributed processing, production architectures, and scalable adoption patterns for global enterprises across multiple industries.
- Created and led global AWS technical communities for Big Data and AI/ML, developing 180+ specialists through standards, workshops, mentoring, technical assets, and hands-on demonstrations.
- Built a SageMaker and TensorFlow forecasting hackathon for Morgan Stanley data scientists and delivered 50+ technical presentations and workshops on ML and distributed-data systems.

EARLIER RELEVANT EXPERIENCE

- Earlier platform leadership includes a fault-tolerant AWS and Cassandra production system at Dimensional Photonics and direct management of a 25-person distributed SaaS team at CambridgeSoft.

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

Machine Learning • Python • SQL • Spark • SparkML • PySpark • distributed systems • large-scale data processing • model evaluation • MLOps • monitoring • observability • SageMaker • TensorFlow • EMR • S3 • Glue • Athena • Redshift • data lakes • data pipelines • forecasting • predictive analytics • optimization • linear programming • AWS • Docker • Kubernetes • CI/CD • FastAPI • PostgreSQL • Cassandra • REST APIs • EventBridge • Step Functions • API Gateway • Git • Linux