

Keith Steward, Ph.D.

Agentic AI Engineer | Production AI Systems

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PROFILE

Hands-on agentic-AI engineer and architect who converts complex operational workflows into production agents, retrieval systems, and reusable automation patterns. Built a GenAI platform supporting 70+ automations across 20+ workflows using LLMs, RAG, agents, enterprise data, APIs, evaluation, and governance. Combines Python engineering, technical discovery, Agile delivery, documentation, and executive communication to move AI use cases from process analysis and specification through secure deployment and measurable operational value.

RELEVANT TECHNOLOGIES

Python • FastAPI • LLMs • AI agents • Agentic AI • RAG • LangChain • LangGraph • PostgreSQL • PGVector • AWS • Amazon Bedrock • Docker • Kubernetes • AI evaluation

SELECTED IMPACT

- Built a production agentic-AI platform supporting 70+ automations across 20+ workflows and up to 50x acceleration.
- Implemented RAG over labor-law documents from all 50 states using crawling, embeddings, PostgreSQL/PGVector, semantic retrieval, and deterministic controls.
- Defined reusable AI architecture, workflow, evaluation, governance, and documentation patterns for an 11-engineer team.
- Created 170+ reusable technical assets and trained 180+ architects while supporting enterprise AI adoption at AWS.

PROFESSIONAL EXPERIENCE

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

Architect and hands-on engineer for an agentic-AI SaaS platform spanning discovery, orchestration, enterprise data, evaluation, and production delivery.

- Architected and helped build AssistX with LLMs, agents, RAG, LangChain, LangGraph, Python/FastAPI, PostgreSQL/PGVector, APIs, workflow orchestration, and AWS services.
- Built agentic workflows that combine model reasoning, deterministic controls, enterprise data, tool execution, input validation, evaluation, observability, and human review.
- Recruited and technically led 11 AI, data, and full-stack engineers while remaining hands-on in coding, integration, deployment, testing, and Agile delivery.
- Delivered 70+ automations across 20+ workflows within eight months, accelerating selected work up to 50x with projected savings above \$50K annually per customer.
- Initiated strategic acquisition discussions regarding IDW's AI platform as part of a planned transition to a senior AI/engineering leadership role.

Sr. Engineering Director, Workforce Management Service | SuccessKPI | Jun 2022–Aug 2023

Led hands-on architecture and engineering for an AI-powered SaaS product integrated with enterprise operational platforms.

- Translated operational workflows into ML forecasting, optimization, automation, APIs, and AWS architecture; delivered the initial production platform in six months.
- Led a seven-member Agile engineering team through design, implementation, testing, release planning, documentation, and customer delivery.

Sr. Director, Data Analytics & Operations | TriMark USA | Mansfield, MA | Aug 2021–May 2022

Modernized operational analytics across 11 acquired business divisions and heterogeneous data environments.

- Identified and prioritized 50+ cross-functional automation and analytics use cases and KPIs with business and executive stakeholders.
- Built the first enterprise AWS data lake in 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–Aug 2021

Designed production governance, security, and deployment patterns for regulated enterprise AI and data systems.

- Defined model-ownership, transparency, bias/drift, auditability, human-oversight, and CI/CD controls across five enterprise initiatives.
- Delivered a cloud-native privacy platform in eight months, automating roughly 90% of a manual workflow.

VP of AI/ML | NorthBay Solutions | Boston, MA | Jan 2019–Nov 2020 (Role ended in company-wide COVID layoff).

Built an AI/ML practice and reusable enterprise data and machine-learning offerings.

- Built the first Data Lake + ML Accelerator full-stack with Python, Django, HTML, CSS, React, and AWS, then led a 24-person remote team toward delivery.
- Delivered AI, analytics, and knowledge-graph solutions for customers including Dun & Bradstreet, Harvard Business Review, and Invesco.

Sr. Specialist Solutions Architect, AI/ML, Big Data & Analytics | Amazon Web Services | Boston, MA | May 2015–Dec 2018

Served as AWS's first Senior Specialist Solutions Architect for AI/ML, guiding enterprise adoption and technical field readiness.

- Advised 200+ enterprise customers on AI/ML, data lakes, analytics, cloud architecture, and production adoption.
- Founded global technical communities of 80 and 100 specialists, trained 180+ architects, created 170+ enablement assets, and delivered 50+ conference presentations.

Director of Software | Dimensional Photonics (Danaher) | Andover, MA | Jan 2012–Oct 2014

Led cloud and device software engineering for a connected medical-device platform through regulated delivery and commercial launch.

- Directed five engineers and a manager while owning the AWS cloud application and software for the Lythos intraoral dental scanner.
- Helped take the product through FDA 510(k) clearance and successful market launch in less than 1.2 years.

Director of Cloud Development | CambridgeSoft | Cambridge, MA | Sep 2010–Nov 2011

Led cloud capabilities and scientific software products for pharmaceutical, biotechnology, and chemical research users.

- Owned architecture, product management, and engineering delivery for cloud and scientific-notebook capabilities, reporting to the VP R&D/CTO.
- Delivered the Biological Notebook product within CambridgeSoft's commercial ChemBioOffice suite before the company's acquisition by PerkinElmer.

EDUCATION & RECOGNITION

- Ph.D., Molecular Biology / Microbiology & Immunology, University of Western Ontario; Canadian Medical Research Council Post-Doctoral Research Fellowship.
- U.S. Patents 8,793,073 and 8,489,334; BioWizard intelligent-agent patent application.

TECHNOLOGIES

Agentic AI • AI agents • LLMs • RAG • Retrieval systems • Enterprise data • Workflow automation • Python • FastAPI • PostgreSQL • PGVector • Embeddings • Vector search • LangChain • LangGraph • Model Context Protocol • Amazon Bedrock • AWS • SageMaker • Docker • Kubernetes • REST APIs • Microservices • EventBridge • Lambda • Step Functions • API Gateway • Kafka • Data pipelines • Prompt engineering • AI evaluation • Guardrails • Observability • Responsible AI • AI governance • CI/CD • Automated testing • Git/GitHub • Linux • Agile • Scrum • SaaS • Security