

MICHAEL MILLER

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Senior AI Solutions Architect & Engineer — GenAI · AWS · ML Platforms

PROFESSIONAL SUMMARY

Senior AI Solutions Architect & Engineer with 10+ years of experience across AI/ML and cloud data platforms, delivering \$35M+ in revenue impact. Designs and builds production-grade generative AI solutions on AWS using serverless architecture, RAG, multi-agent systems, guardrails, human-in-the-loop controls, and enterprise governance. Combines hands-on AWS architecture with deep Snowflake and Databricks experience, translating complex architectures into adoption, consumption growth, and revenue for engineering teams and executives.

CERTIFICATIONS

AWS Certified AI Practitioner — Amazon Web Services, March 2026 [Verify](#)
AWS Solutions Architect Associate (SAA-C03), in progress, exam scheduled August 2026
SnowPro Core Certification — Snowflake, July 2025 [Verify](#)
Databricks Certified Machine Learning Associate — Databricks, February 2025 [Verify](#)

PROFESSIONAL EXPERIENCE

Snowflake

April 2025 - December 2025

Senior Solutions Engineer

Remote (Cincinnati, OH)

- Owned the technical strategy across enterprise sales cycles in partnership with Account Executives, identifying new workloads and guiding validated solution designs from discovery through adoption; helped drive 20%+ YOY consumption growth across every account in the portfolio.
- Led end-to-end solution design for high-priority generative AI use cases, including Retrieval-Augmented Generation (RAG), intelligent document processing and extraction, and AI agents/agent workflows, addressing data ingestion, retrieval, orchestration, application integration, security, governance, scalability, and cost.
- Advised enterprise customers on data and AI strategy, leading discovery of existing architectures and mapping business priorities, technical constraints, security requirements, and integration needs to Snowflake reference architectures and sequenced adoption roadmaps.
- Led enterprise proofs of concept (POCs) and delivered 25+ customer-specific demos, hands-on labs, and enablement sessions using customer data to demonstrate the business value of Cortex AI, Document AI, Cortex AI SQL functions, and Snowflake ML, advancing opportunities toward technical close.
- Contributed to \$5M in renewal ACV through technical risk assessments, architecture reviews, and executive presentations that connected Snowflake capabilities to business value and helped de-risk customer investment decisions.
- Architected agentic systems using Cortex Agents, tool calling, multi-step LLM orchestration, semantic models for NL-to-SQL, and Snowflake-managed MCP Servers that securely connected enterprise data and tools to external AI agents.

The E.W. Scripps Company

February 2024 - March 2025

Senior Manager, Data Science

Cincinnati, OH, USA

- Managed a team of 4 data scientists and analysts, delivering AI/ML models that generated \$20M+ in revenue across sales, operations, and customer engagement.
- Advised senior leadership on AI strategy and established best practices for model monitoring, governance, and MLOps, ensuring scalable and compliant AI across the organization.
- Led enterprise-wide AI initiatives including data governance, third-party technology evaluations, and cross-functional collaboration with business leaders on data monetization strategies.

The E.W. Scripps Company

June 2021 - February 2024

Senior Data Scientist

Cincinnati, OH, USA

- Built and deployed audience forecasting models to predict viewership and programmatic ad optimization systems to improve ad placement decisions, increasing prediction accuracy by 400% and driving \$15M in incremental revenue.
- Led the transition from batch inference to real-time scoring, improving model efficiency by 60% and giving business teams faster access to model outputs for decision-making.
- Designed ML pipelines in Azure Databricks, Snowflake, and MLflow that standardized deployment, cut time-to-market for new models, and established a repeatable MLOps foundation.

First Financial Bank

October 2020 - June 2021

Analytics Manager

Cincinnati, OH

- Defined KPIs for digital products and built data-driven decision frameworks adopted across multiple business lines.
- Built customer segmentation analyses to improve marketing targeting and conversion rates across key customer segments.
- Partnered cross-functionally to embed data insights into business operations, driving efficiency improvements across teams.

Worldpay

September 2018 - October 2020

Senior Data Analyst

Cincinnati, OH

- Used random forest feature importance and Tableau to identify the source of fraudulent activity across enterprise client portfolios, pinpointing where attacks were originating and informing a mitigation strategy that cut fraud losses by \$2M per month.
- Developed interactive BI applications for Fortune 500 retailers including Walmart, Kroger, and Nordstrom using R and Shiny.

SELECTED PROJECTS

ResolveIQ — Enterprise AI Case Resolution Platform | [resolveiq.mikemiller.ai](#)

Agentic AI | Retrieval-Augmented Generation (RAG) | Human-in-the-Loop | ML Risk Scoring | Amazon Bedrock | Serverless Architecture

- Architected an event-driven, serverless AWS platform (API Gateway, Lambda, Step Functions, EventBridge, DynamoDB, Amazon Bedrock, and CloudWatch) that transforms fragmented, high-risk support cases into cited, evidence-backed resolution recommendations grounded in enterprise policies and prior resolutions through RAG.
- Designed an agentic AI workflow combining ML risk scoring, LLM-generated recommendations, and a human-in-the-loop approval gate, with guardrails, source attribution, RBAC, and automated AI evaluation to deliver explainable, governed decisions.
- Delivered the full stack as infrastructure-as-code (IaC) with AWS CDK, engineered for resilience and operability through retry logic, approval gates, audit logging, observability, and per-run AI cost visibility.

TrustResponse — Governed Multi-Agent Security Review | [trustresponse.mikemiller.ai](#)

Multi-agent orchestration | RAG | Structured outputs | Human-in-the-loop | Evaluation

- Architected a governed multi-agent AI system for security-questionnaire automation using LangGraph-orchestrated Drafting, Compliance Critic, Consistency, and Gap-and-Escalation agents over a RAG evidence base. Enforced the principle that no agent approves its own work, catching unsupported or conflicting commitments before they become contractual liabilities.
- Designed for trust over coverage with human-in-the-loop approvals, deterministic routing, escalation, and structured outputs validated by an evaluation harness (7/7 planted traps caught; 0 confidently wrong answers; retrieval Hit@1 = 1.00; MRR = 1.00) that makes governance measurable rather than aspirational.
- Built a cost-optimized, fully serverless AWS platform (Python FastAPI on Lambda with Function URLs, DynamoDB, S3, SQS, Cognito, Amazon Bedrock) delivered as infrastructure as code (IaC) with AWS CDK and OIDC-based GitHub Actions CI/CD with Well-Architected trade-offs (in-memory retrieval over a managed vector DB; scale-to-zero compute) holding live cost to approximately \$0 to \$5 per month.

ArchIQ — AWS Solutions Architect Study Platform & AI Tutor | [archiq.mikemiller.ai](#)

Serverless Architecture | Amazon Bedrock | RAG | CloudFront/S3 | Infrastructure-as-Code (IaC) | Cost & Security Guardrails

- Designed and shipped ArchIQ, an interactive AWS Solutions Architect (SAA-C03) learning platform with 175+ typed content modules spanning services, architecture patterns, decision guides, service comparisons, and exam traps. Built it with Vite, React, and TypeScript and added Mermaid architecture diagrams, Zod-validated content, and client-side progress persistence.
- Architected “Ask ArchIQ,” a serverless AI tutor on Amazon Bedrock (Claude), using a page-grounded RAG pattern with adjustable answer depth and hardened prompt-injection defenses (untrusted-context isolation and strict scope enforcement). Delivered it through a Node.js Lambda behind API Gateway with DynamoDB-backed rate limiting.
- Built the full AWS infrastructure as code (CloudFormation) following Well-Architected principles: private S3 + CloudFront (Origin Access Control, HTTP/2/3, Route 53, ACM), least-privilege IAM, a shared-secret origin check, GitHub Actions CI/CD via OIDC (no long-lived credentials), and an AWS Budgets alarm to cap Bedrock spend.

EDUCATION

University of Toledo

Master of Arts (MA), Economics

May 2016

University of Toledo

Bachelor of Arts (BA), Economics

May 2015

SKILLS

- **Solutions Architecture & Pre-Sales:** Pre-sales engineering, sales engineering, customer discovery, requirements gathering, solution architecture, system design, integration architecture, architecture reviews, technical validation, API design, Distributed Systems, scalability, high availability, disaster recovery, security and governance, Observability, cost optimization, executive communication, stakeholder management, technical enablement, proofs of concept (POCs)
- **AWS & Cloud Architecture:** AWS Well-Architected Framework, serverless architecture, event-driven architecture, VPC networking, public/private subnets, route tables, security groups, NACLs, PrivateLink, VPC endpoints, API Gateway, Lambda, Step Functions, EventBridge, SQS/SNS, Auto Scaling, ECS/Fargate, ALB/NLB, CloudFront, Route 53, RDS/Aurora, DynamoDB, Cognito, IAM, WAF, CloudTrail, AWS Budgets, AWS CDK, CloudFormation, Infrastructure as Code (IaC)
- **Generative AI & Agentic Systems:** LLM, RAG, embeddings, vector search, S3 Vectors, Pinecone, multi-agent orchestration, LangGraph, LangChain, Model Context Protocol (MCP), guardrails, AI evaluation, source attribution, structured outputs, semantic modeling
- **Data, Machine Learning & Platforms:** Machine Learning, MLOps, model monitoring, Data Governance, data lakes, Snowflake, Cortex AI, Databricks, MLflow, Apache Spark, Scikit-learn, Xgboost, TensorFlow, PyTorch, NLP, Forecasting, Postgres, MongoDB, MySQL, Microsoft SQL Server, BigQuery, Microsoft Azure, Google Cloud Platform
- **Development, Delivery & Analytics:** Python, SQL, R, FastAPI, Streamlit, Shiny, REST APIs, Git, GitHub Actions, DevOps, Docker, Linux/Unix, Bash, Jupyter, Tableau, Power BI