

Daniel Bove

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Principal Cloud Architect with 20+ years designing distributed systems and data platforms on AWS. Specializes in serverless architectures and developer platforms, delivering multimillion-dollar cost reductions and new revenue capabilities across engineering organizations.

Professional Experience

Principal Cloud Architect - Slice | 2022-2026

- Reduced data platform infrastructure costs by >\$1M annually by leading the Databricks platform migration to AWS-native services across multiple teams (EMR Serverless, AWS Glue, Airflow).
- Built a serverless ML voice transcription and classification system for Twilio call streams, generating ~\$500K/year revenue and reducing costs by ~\$100K/year, including PCI DSS 4.0-compliant architecture (network isolation, secure processing boundaries, automated audio redaction).
- Established an organization-wide API governance platform using OpenAPI, standardizing API design across teams, enforcing backward compatibility in CI (oasdiff, Redocly), and automating SDK generation and distribution (openapi-generator-cli, Gemfury).
- Designed and led the transition from Salesforce-centered order processing to service-based backend systems, integrating Shopify sales, Adyen payments, EasyRoutes logistics, and internal backend services while progressively replacing legacy Salesforce functionality.
- Re-architected the company's Kafka streaming platform by introducing schema governance (Karapace on Amazon MSK), reducing message failures and enabling migration of multiple pipelines from batch to real-time processing.
- Developed a distributed web-scraping platform crawling 20,000+ heterogeneous websites, scaling burst workloads to 600 AWS Spot instances while maintaining average operating costs under \$20/day.

Principal Cloud Architect - Complion | 2021-2022

- Built the system architecture and drove delivery enabling simultaneous release of the organization's largest software update and achievement of a critical industry certification.
- Drove architectural improvements across application code, cloud infrastructure, and operational and quality validation processes to meet certification and business continuity requirements.

Staff Cloud Architect - CommerceHub | 2018-2021

- Architected the organization's multi-account AWS environment (50+ accounts, \$1M+ annual cloud spend), including networking, IAM architecture, logging, and automated account vending.
- Identified architectural changes projected to reduce infrastructure costs by up to 90%.
- Built the company's first machine learning platform, implementing automated pipelines to train and deploy models developed by the data science team using PySpark, AWS Glue, and SageMaker.
- Designed cloud security controls and compliance monitoring using AWS Config, GuardDuty, Security Hub, and EventBridge, integrating alerts with Jira workflows and the organization's SIEM platform.
- Served as a senior technical resource for the Cloud Center of Excellence, producing reference architectures and delivering technical guidance for ~100 engineers.

Technical Architect - New York Independent System Operator | 2011-2018

- Designed and implemented a real-time telemetry ingestion prototype for Phasor Measurement Units (PMUs) processing 500,000+ per minute C37.118 protocol readings, demonstrating scalable architectures for grid telemetry systems and presenting the results to the ISO/RTO Council (IRC) Architecture Working Group.

- Led architecture and implementation of multiple enterprise initiatives including IAM systems, enterprise service bus infrastructure, development pipelines, and collaboration tooling.
- Served as lead architect for AWS initiatives supporting Distributed Energy Resources, receiving the EVP Annual Award for transparency and innovation.

Information Systems Consultant - Logic Technology | 2008-2011

- Designed message-driven middleware and REST services; improved response times 10x.

Software Architect - CommerceHub | 2003-2007

- Led development of large-scale supply chain platform; mentored team of 10 engineers; awarded President's Cup for contributions to the flagship web product.

Projects

Doubleday - Serverless MLB Statcast Lakehouse

- Designed and implemented a serverless lakehouse on AWS (S3 + Iceberg + Athena) ingesting 100M+ rows/season.
- Built idempotent, partition-aware ingestion pipelines (Step Functions + Lambda) with per-partition isolation and failure tracking, resolving Iceberg concurrency limits via partition overwrites.
- Exposed low-latency APIs (API Gateway + Lambda + DynamoDB) with Cognito federation.
- Infrastructure defined in Terraform with GitHub Actions (OIDC), optimized for zero-idle cost.

RotoHero - Multi-Agent LLM Recommendation System

- Architected a multi-agent system using LangGraph with agents coordinated via shared blackboard.
- Implemented multiple execution strategies (parallel, debate, reactive) behind a unified protocol enabling interchangeable agent topologies.
- Designed cost-aware context management (rolling windows, debounced triggers) to control token usage across chained LLM calls.

Core Technologies

- AWS: Lambda, API Gateway, S3, MSK/Kafka, Step Functions, EventBridge, Glue, EMR Serverless, Athena, SageMaker, DynamoDB, Cognito
- Languages: Python, Java
- Infrastructure as Code & CI/CD: Terraform, CloudFormation, GitHub Actions
- Distributed Systems / Event-Driven Systems: Lambda, Step Functions, EventBridge, SQS
- Data Platforms & Analytics: S3, Iceberg, Athena, EMR Serverless, Glue, PySpark
- APIs & Platforms: REST, OpenAPI, SDK generation
- Security & Observability: IAM, GuardDuty, AWS Config, Security Hub, Datadog, CloudWatch

Certifications

- Amazon Web Services Solutions Architect - Professional
- Amazon Web Services DevOps Engineer - Professional
- (ISC)² Certified Information Systems Security Professional (CISSP)
- (ISC)² Certified Cloud Security Professional (CCSP)

Education

Master of Engineering, Cornell University
 Bachelor of Arts, Cornell University