

Caleb Lamb

Solutions Architect · Production AI Systems on AWS

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SUMMARY

Solutions Architect who designs and ships **production AI systems on AWS** for one of the largest healthcare payers in the U.S. Over four years on Centene's Rapid AI Delivery (RAID) team, I've taken nine Bedrock-based solutions from whiteboard to production, generating **\$14.9M+ in documented annual value** across claims, enrollment, contracts, clinical coding, and authorization. I coined the team's SEAM pattern (Serverless, Event-driven, AI-integrated, Microservices) and pair deep hands-on engineering — TypeScript/Python, multi-agent LLM pipelines, event-driven serverless — with the ability to brief boards, run AI-governance reviews, and enable 200+ engineers. Nearly two decades building and scaling data and product systems, including two startups taken from concept to acquisition.

CORE EXPERTISE

AWS & Cloud: Bedrock, Lambda, Step Functions, EventBridge (Scheduler / Pipes), API Gateway, DynamoDB (single-table), OpenSearch, Neptune, Cognito, S3, CloudFront, CDK / IaC, ECS / Fargate

Applied AI & LLM: RAG & semantic vector search, multi-agent orchestration (supervisor + sub-agents), Bedrock Converse, document AI / OCR & extraction, prompt engineering, human-in-the-loop design, AI governance

Architecture: Event-driven & serverless microservices (SEAM), CI/CD & progressive delivery, observability, tenant isolation, infrastructure-as-code

Languages & Tooling: TypeScript / Node.js, Python, JSON / JSONata, Astro / Svelte, Docker, Kafka

Healthcare Payer: X12 EDI (837I/837P, 277, 270/271), Amisys, QNXT, prior authorization & UM, claims adjudication, FHIR / LOINC, CMS-0057-F interoperability; Medicaid, Medicare, and Marketplace

EXPERIENCE

Centene Corporation — Solutions Architect, Rapid AI Delivery (RAID)

Aug 2022 – Present

Remote · Banner Elk, NC

Architect and hands-on lead for RAID's production AI portfolio — a charter team building Bedrock-based systems across Centene's payer operations. Own architecture, build, and delivery end to end; set the team's patterns and standards; and brief executives and the board.

- **Coined and operationalized the SEAM architecture pattern** (Serverless, Event-driven, AI-integrated, Microservices), now RAID's unifying delivery framework across the portfolio.
- **Delivered 9 solutions** — \$14.9M+ documented annual value, 7 live in production, 500k+ AI requests/day — spanning benefits, enrollment, billing, contracts, clinical coding, and authorization.
- **CoverageIQ** — designed a RAG / semantic-search service over Medicaid plan handbooks; ~500k requests/day, inception to production in 3 months, zero incidents since launch, later expanded to Duals plans.
- **Auth Match** — architected an event-driven authorization-to-claim matching engine (Lambda / API GW + Auth RTR + Amisys); \$8.4M annual savings in 2025, 3.4M+ overturns prevented, 6B+ claims processed, overturn rate down 18.8% vs. baseline.
- **PRISM** — built a contract-intelligence pipeline extracting terms from 650k+ provider contracts into structured JSON and auto-generating PIX reimbursement config (HITL-gated); cut PIX update lead time by 30 days. Presented to the board.
- **EGO** — shipped an unattended OCR / field-extraction pipeline for enrollment forms (Control-M scheduled, S3); \$6.5M projected annual premium uplift, SLA cut from 5 days to 2, and ~\$125k/yr manual cost eliminated.
- **I-Bill** — delivered a VectorRAG itemized-bill auditing pipeline for the high-dollar team; ~\$300k/yr labor savings (2,880 hours), with interest- and penalty-avoidance pushing total value toward \$1M.
- **AuthIQ (Frictionless UM)** — designed a supervisor + four-sub-agent system (fetch, index, summarize, and RFAI via 277 EDI) over MECC / TruCare / FileNet, embedding AI recommendations directly into the analyst workflow.

- Ran **AI-governance peer reviews** against a 111-control lifecycle framework, producing severity-tiered findings for partner teams.
- **Drove organization-wide enablement** — hosted 4 annual hackathons (7 teams of 7) plus weekly architecture office hours open to the broader org, giving 200+ engineers hands-on experience with the SEAM pattern and AWS.

Keet Health (acquired by WebPT) — Senior Product Manager

2021 – 2022

Remote

Owned product roadmaps for provider/patient web and patient mobile apps in digital MSK care. Ran human-centered design and agile delivery, defined analytics and event tracking (JSON acceptance criteria), and built BI dashboards for feature adoption and usage.

Centene Corporation — Technical Product Owner, Claims Modernization

2020 – 2021

Charlotte, NC

Defined the technical roadmap for multiple claims-modernization modules (MVP → 18-month delivery). Built POCs for serverless architecture and state-machine orchestration, partnered with on-prem teams on an AWS migration plan using IaC, and drove CI/CD, progressive delivery, and event-driven architecture for the new adjudication platform.

Sealed Air — Digital Product Owner

2019 – 2020

Charlotte, NC

Led scrum teams across ecommerce, AR field support, and food-processing automation; moved \$3M of revenue from offline to online in 6 months.

2ULaundry — CTO / Product & Operations Lead

2016 – 2019

Charlotte, NC

Built the digital product, engineering team, and backend systems (customer CRM, logistics / ops, invoicing, BI) that scaled the business from 20 to 2,000+ MAUs and ~\$1.5M ARR across three cities. Deployed Amazon Lex voice and chat assistants for 24-hour support and self-service account creation and scheduling.

EARLIER CAREER — FOUNDER & DATA / SYSTEMS LEADERSHIP

- **Pacatio — Founder** (2013–16, Panama City): built a digital-wallet platform for LATAM retailers to ~3,000 users; selected 1 of 10 from 120 applicants for the QC FinTech accelerator.
- **Aviesta — Co-founder / Ecommerce & Ops** (2010–13): scaled a multi-currency ecommerce platform to ~2M users (3rd-largest in Mexico) and led a Magento → Python re-platform before its 2013 acquisition.
- **Blue Casa Communications — Director of BI / Principal Data Architect** (2006–10): built the data warehouse and automated customer-segmentation / ML scoring that cut churn from ~15% to as low as 6% and reduced opex 25%; grew with the company from 20 to ~150 employees.

EDUCATION

California Polytechnic State University, San Luis Obispo — B.S. Electrical Engineering (emphasis: Digital Communications), 2002