

# Anthony B. Tedesco

Cloud Solutions Architect · Cloud Engineer · AWS Certified Solutions Architect – Associate (SAA-C03) · Serverless & real-time systems since 2019

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## SUMMARY

Solutions architect who has designed and operated entire platforms end-to-end since 2019 — self-taught, building in public. I architect the whole stack: multi-tier and multi-tenant distributed systems, real-time WebSocket backends, applied computer vision, event-driven data pipelines, and the container orchestration that ties them together. Production AWS experience — serverless (Lambda, DynamoDB, API Gateway, Aurora DSQL) provisioned as **Infrastructure as Code with AWS CDK / CloudFormation**, plus Rekognition and IVS — on a portable Kubernetes/Docker footprint that maps cleanly onto EKS/ECS, with cloud designs that span the **AWS Well-Architected** pillars — **high-availability multi-AZ** topologies, fault tolerance and disaster recovery, least-privilege IAM, performance efficiency, and cost optimization. I make the architectural trade-offs that matter and document them for the operators who run the system.

## CERTIFICATIONS

**AWS Certified Solutions Architect – Associate** (SAA-C03) · 2026

## EXPERIENCE

**Solutions Architect · Verified Fishing, Inc. (DerbyFish · Kala™)**

Apr 2026 – Present

*Real-time verified-catch platform · derby.fish · kala.fish · built by a two-engineer team*

- **Lead architect on the DerbyFish platform, spanning 20+ repositories:** a cross-platform client (one Expo / React Native / Next.js codebase to iOS, Android, web), a real-time Linux backend, an AI verification stack, an on-chain provenance layer, and the device-to-leaderboard data pipeline connecting them.
- **Real-time distributed backend:** designed custom **Python + Node.js WebSocket APIs** driving live outings and AI result delivery, with applied computer vision (YOLO + OpenAI Vision over a 419-species DB, **AWS Rekognition**) and live video on **AWS IVS**.
- **Data architecture:** 100+ tables governed by **300+ row-level-security policies** (least-privilege tenant isolation), feeding a 40-model dbt medallion (15 Gold marts) with an MCP server exposing the index directly to AI agents.
- Designed the **BHRV** evidence protocol and the **Capture → Score → Witness → Stamp** trust flow — a tamper-evident architecture turning a smartphone catch into a verifiable record, anchored on an on-chain Fish Card layer (Flow).
- **Payments architecture:** Stripe Connect rails for both payouts and onboarding under the BAIT usage economy (\$1 per Verified Fishing Hour, no subscription) — designed to avoid money-transmitter exposure.

**Solutions Architect · AGFarms LLC**

Mid 2024 – Present

*Venture studio · built in partnership with Gianangelo Dichio · agfarms.dev*

- **Lead architect** across the studio's production portfolio — partnering with the team to design, ship, and operate the systems AGFarms takes to market.
- **Nucleus Brain** (enterprise-ai · [nucleusbrain.com](https://nucleusbrain.com)) — designed an **open-source multi-tenant agentic-infrastructure platform:** native MCP transport (Claude / Anthropic / OpenAI), real-time NodeGraph, RAG retrieval, scheduled CronJob agent passes, Neo4j knowledge graph. Runs on a hand-rolled **k3s cluster** (15+ namespaces, traefik ingress, StatefulSets) — a portable container architecture that ports directly to EKS or ECS.
- **CI/CD & IaC:** designed lint → test → build → deploy pipelines on GitHub Actions with Helm / Kustomize manifests and Docker images across the portfolio.
- Lead architect on the **Walleye Fest** tournament portal (the upstate-NY fishing derby that first hired our firm) — Rust API + Next.js operator dashboards — plus tackle-shop and captain control surfaces.
- Studio systems: **Happy Swims** (scheduling marketplace, Miami), **Patagonia Moto Rentals** (fleet booking suite), and **AGFPay** (crypto payment links + hosted checkout with stablecoins across BTC / ETH / SOL / USDC).

**Solutions Architect · Roley Inc.**

2023 – 2024

*Acting / casting auto-application SaaS · roley.me*

- Designed and built the product end-to-end; messenger-royley was the messaging backbone.
- Designed the core system as a fleet of **ephemeral applier agents podded into Docker and orchestrated on a Kubernetes cluster I built** — paired with Backstage / Casting Networks scrapers, an auth API, and a Python browser-automation driver. An early hands-on exercise in ephemeral workloads and container orchestration.
- Actors loved the product; the casting platforms blocked our bots into the ground and the business model proved structurally unviable.

**Solutions Architect & Lead Engineer · Sonar**

2026

*Built for H0: Hack the Zero Stack (AWS Databases × Vercel) · real-time hyperlocal place-memory platform*

- Designed and shipped a **fully serverless, scale-to-zero AWS architecture** (us-east-1): **DynamoDB** on geohash partition keys with 24-hour TTL and Streams as the high-write ephemeral path; **Aurora DSQL** as the relational system-of-record (archive + analytics + billing); **API Gateway WebSockets + Lambda authorizer** for member-gated real-time fan-out; **S3 + CloudFront** for presigned media delivery — the whole stack provisioned as **Infrastructure as Code via AWS CDK** (CloudFormation).
- Built “ask the place” on **Amazon Bedrock (Claude) + Transcribe** and usage-metered billing (Stripe) off DynamoDB Streams → DSQL rollups — bounding each AI query's context by geofence + 24h window to eliminate any vector store.

## SELECTED PROJECTS (MAJOR PERSONAL AUTHORSHIP)

- **Toll Road Music** — ETHGlobal Buenos Aires: pay-as-you-go streaming on x402 with Filecoin storage and a Coinbase embedded-wallet flow.
- **PUQ City** — digital-city platform: React Native + Expo, Solidity (ERC-20 + NFT), Mapbox, dual fiat + crypto rails on 16 Supabase Edge Functions.

## SKILLS

### Cloud & AWS

AWS Certified Solutions Architect – Associate (SAA-C03). Production AWS: Lambda, DynamoDB, Aurora DSQL, API Gateway (REST + WebSockets), S3, CloudFront, Bedrock, Rekognition, IVS — provisioned as **Infrastructure as Code (AWS CDK / CloudFormation)**. Design fluency: VPC, EC2, RDS / Aurora, Route 53, ELB & Auto Scaling, IAM, Cognito, SQS / SNS, EventBridge, CloudWatch, Secrets Manager, EKS / ECS / Fargate, multi-AZ HA, disaster recovery, AWS Well-Architected Framework, cost optimization; GitHub Actions CI/CD

### Architecture

Multi-tier & multi-tenant distributed systems, microservices, real-time WebSocket systems, event-driven data pipelines, tamper-evident provenance flows, row-level-security & least-privilege access, payments & ledger design

### Languages

TypeScript, Python, SQL (PostgreSQL / PostGIS / TimescaleDB), Rust, Go, Solidity, Bash

### Backend & data

Node.js, WebSockets, FastAPI / Express, Supabase + Edge Functions, dbt medallion pipelines, applied CV (YOLO + Vision APIs)

### Frontend

React Native (Expo SDK 54), Next.js 14/15, React 19, Tailwind, Three.js / R3F, Mapbox

### AI & web3

MCP transport (FastMCP), Claude / Anthropic / OpenAI SDKs, Nucleus Brain orchestration (RAG + CronJob agent passes); Flow NFTs, x402, Hardhat (ERC-20 / NFT), Uniswap V4 SDK, Coinbase embedded wallet

**Infra** Live k3s cluster (15+ namespaces, traefik, StatefulSets, CronJobs), Docker / Helm, nginx, Linux (Fedora)

**Education:** no formal CS degree — self-taught against primary sources (papers, RFCs, source code, Harvard / MIT / Stanford lectures). Full *Engineering Portfolio* available on request.