

ALEX RUBÉN MARTÍNEZ PUMALLIHUA

Senior Software Engineer — Cloud & Platform Engineering

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PROFESSIONAL SUMMARY

Software Engineer with 4+ years architecting and shipping critical systems in healthcare, retail and education across LATAM and the US. End-to-end ownership: data models, multi-DB reactive BFFs, microservices, cloud-native deployments on AWS and GCP. Founder of **Operaly**, a multi-tenant SaaS ecosystem in production on Kubernetes (Java 21 / Quarkus). Track record of cutting processing times up to 70% and reducing operational complexity through deliberate architecture decisions.

CORE SKILLS

- **Languages & Frameworks:** Java 17/21, Spring Boot 3, Quarkus, Hibernate Reactive, TypeScript, Angular, React, Next.js, PL/pgSQL
- **Cloud:** AWS (Lambda, API Gateway, DynamoDB, RDS, S3, CloudFront, Cognito, KMS, EventBridge, Step Functions), Google Cloud, Azure
- **DevOps & SRE:** Terraform, Kubernetes, Helm, Docker, GitHub Actions, GitOps, CI/CD, Caddy, Nginx, Grafana, Prometheus, Sentry
- **Databases:** PostgreSQL, Oracle, DynamoDB, MySQL, Flyway
- **Architecture & Patterns:** Multi-tenant SaaS, Microservices, Reactive Programming, Event-driven, Saga + Idempotency-Key, Clean Architecture, DDD, CAP trade-offs
- **Compliance:** HIPAA, NY SHIELD Act, Ley 25.326, Ley 29733
- **Practices:** TDD, Code/Peer Review, IaC, Production-readiness audits, Scrum

PROFESSIONAL EXPERIENCE

EVOL — AUNA HEALTHCARE | Software Engineer | May 2025 - Present

Integrated Medical Auditing v2 — clinical and financial auditing system processing 2,000+ daily records.

- **Architected and led** the complete restructuring of the core module, unifying data from **3 heterogeneous databases (PostgreSQL, Oracle, DynamoDB)** via a reactive multi-DB BFF — **reduced per-record review time ~60%**.
- Authored the v2 ADR: chose `CompletableFuture` + 4 dedicated thread pool executors over end-to-end WebFlux for bounded concurrency. The executor + reactive composition design became the team's reusable batch / multi-source orchestration pattern.
- Built BFF 2.0 in Spring Boot 3 / Java 17 with **60+ REST endpoints**; reactive/functional end-to-end (backend `CompletableFuture` + Streams; frontend RxJS `forkJoin`, `switchMap`); led BFF code reviews.
- Restructured a monolithic Angular component of ~8,800 lines into 8 lazy-loaded tabs with a Facade pattern; established the tab-state pattern as the team baseline for complex modules.
- Designed a daily mass-auditing scheduler per site with configurable sequential execution and `AtomicBoolean` concurrency control; integrated external systems: Magnus (JWT-secured oncology analysis), SMCIFS file server, AWS S3 and AWS Secrets Manager.
- Built multi-user concurrency safety: original snapshot pattern for item-level conflict detection with undo, role-based assignment workflow and an implicit mutex over case state transitions.

JPH SOLUTIONS SAC | Full-Stack Engineer | Dec 2023 - Feb 2025

POS Modernization — legacy monolithic JSP point-of-sale migrated to React SPA + Spring Boot microservices without freezing daily commercial operations.

- **Architecture decision:** strangler-style incremental migration; legacy JSP and new React SPA coexisted in production while modules moved one at a time.
- Delivered the full SPA (React, Shadcn, TailwindCSS) covering **20+ views**; introduced Redux Toolkit + Tanstack Query with cache/invalidation/optimistic-update patterns that **cut redundant backend calls ~40%**.

- Shipped **30+ REST endpoints** across legacy Java 1.8 services and new Spring Boot 3 microservices on Oracle 18c; built commercial dashboards with Recharts and schema-first validation with Zod.

IDEAS SAC | Software Developer | Aug 2023 – Dec 2023

Virtual Library System — web platform serving 5,000+ students across higher-education institutes in Ayacucho.

- Designed and shipped the full system in Java / Spring Boot + MySQL; built an automated Python scraping pipeline that **accelerated e-book cataloging by 60%** versus manual entry.
- Tuned SQL queries and MySQL indexing to **cut portal load times by 30%**; integrated enrollment and student-tracking modules to eliminate manual permission management.

POSGRADO UNSCH | Full-Stack Developer | Feb 2023 – Jun 2023

Administrative Modernization — automated certificate generation and portal modernization for a public university.

- Designed and shipped an automated certificate-generation system in Java / Spring Boot serving 500+ graduate students, **reducing issuance time by 70%**; portal modernization **lifted web traffic +12%**.
- Containerized services with Docker for repeatable deploys; migrated 5,000+ historical academic records with **98% transfer accuracy**.

JPH SOLUTIONS SAC | Junior Front-End Developer | Feb 2022 – Feb 2023

Commercial Billing System — production billing platform.

- Built core billing modules with Java 1.8 / JSP on Oracle 18c; established the team's first **CI/CD pipeline** with Git, moving deploys from manual to automated build/validate/deploy.

PERSONAL ENGINEERING & PRODUCT

Operaly — operaly.lat | Founder & Architect | 2024 – Present

Multi-tenant SaaS in production. **Defined the platform architecture** (Java 21 + Quarkus per service, Postgres with tenant-scoped routing, K8s per vertical, GitOps CI/CD) that current and future verticals follow. **Park** live in production (park.operaly.lat); **Food** and **Fit** in beta — growing from one vertical to a multi-product platform on a single codebase.

Cat Gym — catgym.operaly.lat | Architect & Sole Engineer | 2025 – Present

Direct-client gym SaaS, **end-to-end ownership across requirements, architecture, delivery and operations**. Quarkus + Hibernate Reactive on Postgres; secure-by-default JWT with refresh-token family rotation (OAuth2 token-theft pattern); Clean Architecture; **210 tests**. Adversarial production-readiness audit (3 parallel reviewers + PM + Tech Lead) established as the quality gate. Deployed on Contabo VPS (Caddy + Nginx), CI/CD via GitHub Actions.

Lazer Spa (via Aquaware Consulting) | Architecture & Fullstack | 2024 – 2025

Aesthetic-clinical Spa ERP scaling Lima → NYC → Buenos Aires. **Architected the v2** cloud-native serverless on AWS and authored the architecture decision records: **20+ Lambdas** + API Gateway, **DynamoDB single-table** (15+ tables) + Aurora PostgreSQL for ACID, multi-tenant Cognito, KMS per bounded context, EventBridge + Step Functions. **CAP** split: AP default, CP on Square via Idempotency-Key + Saga. Terraform/CodePipeline, multi-region. Compliance: HIPAA, NY SHIELD, Ley 25.326, Ley 29733.

EDUCATION

Universidad Nacional Mayor de San Marcos (UNMSM) — Master's in Systems Engineering & Informatics, mention in Software Engineering | 2026 – 2027 (expected) **Universidad Nacional San Cristóbal de Huamanga** — Bachelor in Systems Engineering | 2018 – 2024

CERTIFICATIONS & LANGUAGES

- **Certifications:** Google Cloud — Associate Cloud Engineer track · GitHub Foundations · AWS Educate — Generative AI (Credly) · Scrum Foundation (SFPC) — Certiprof · Oracle Next Education — Java/Spring Boot
- **Languages:** Spanish (native) · English (B1, professional working)