

ANTHONY DANIEL VILLEGAS OCAÑA

SENIOR SOFTWARE ENGINEER · FULL STACK ARCHITECT

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PROFESSIONAL SUMMARY

Senior Software Engineer and Full Stack Architect with a Master's in Artificial Intelligence and over 6 years of experience driving digital transformation. Expert in designing high-availability distributed systems using the TypeScript ecosystem (React, Next.js, Node.js) and Python (Django). Proven track record in cloud-native architecture on AWS, orchestrating DevOps pipelines, and integrating AI models to solve complex business inefficiencies.

PROFESSIONAL EXPERIENCE

HEIMDAL (FREELANCE)

Guayaquil, Ecuador

Lead Software Engineer & Technical Architect

2021 – Present

- **DevOps & infrastructure modernization:** orchestrated the migration to modern CI/CD with GitHub Actions, standardizing automated testing and deployment. Implemented Railway for resilient microservice orchestration and Fabric to automate secure management of on-premise legacy servers, cutting deployment friction by 40%.
- **Real-time order automation:** engineered a fault-tolerant order processing system with Django and Next.js, leveraging Braze for WebSocket-based real-time communication. Optimized data flow between clients and vendors, reducing order cancellation rates by 15%.
- **Enterprise data visualization:** directed the end-to-end architecture of bespoke analytics dashboards for AbInBev and Tada Delivery. Integrated React frontends with Azure data lakes to visualize terabytes of sales data, enabling real-time executive decision-making.
- **Customer service AI optimization:** designed a high-performance customer support platform that streamlined ticket workflows, resulting in a 30% reduction in average response time.
- **E-commerce scalability:** developed custom WordPress plugins and secure payment gateway integrations for high-traffic retail clients, ensuring 99.9% transaction uptime during peak sales periods.

AR HOLDINGS

Remote / Hybrid

Senior Full Stack Developer

2023 – Present

- **Cloud-native AWS architecture:** architected mission-critical AWS infrastructure (EC2, Lambda, S3). Implemented AWS Secrets Manager to enforce strict security compliance and automate credential rotation.
- **Omnichannel loyalty ecosystem:** engineered the integration between Shopify and external loyalty programs. Synchronized user data with Apple Wallet and Google Wallet for real-time point tracking and improved retention.
- **AI-driven workforce optimization:** developed predictive staff scheduling using Django and Tailwind CSS, integrated with regression-based ML models. Automated shift allocation from historical foot traffic, increasing workforce assignment efficiency by 30%.
- **Wholesale B2B platform:** built a B2B wholesale management system with automated dynamic quoting and a self-service client portal, contributing to a 20% year-over-year increase in wholesale revenue.
- **Autonomous dining systems:** innovated a contactless dining experience using React Native and WebSockets for real-time kitchen integration; engineered multi-modal logistics tracking for fulfillment.
- **RFID-powered smart fitting rooms (built from scratch):** designed and developed from the ground up an Android application backed by Django and WebSockets on Linux servers that reads garment RFID tags as items enter the fitting room, identifying in real time what each customer tried on and speeding up service across several of the group's brands. Traveled to Costa Rica to deploy and roll it out in-store alongside the local teams.
- **RFID inventory counting with handheld readers:** built an Android application for handheld RFID readers that performs in-store inventory counts by sweeping the sales floor, reconciling reads against system stock and drastically cutting the time and error of manual counts.

- **Big data pipeline optimization:** refactored data ingestion pipelines using Databricks and advanced validation logic, achieving a 30% increase in data accuracy for social sentiment analysis.
- **Full stack analytics interfaces:** developed Angular interfaces connected to Azure Databricks APIs to democratize business intelligence for non-technical stakeholders.
- **Code quality standards:** instituted rigorous code reviews and modular architecture standards, reducing technical debt.

- **Institutional digital transformation:** directed the architectural redesign and SEO optimization of the main university portal, driving a 40% increase in organic traffic and contributing to a 25% increase in new student enrollment.
- **CRM ecosystem unification (REDEI):** consolidated the REDEI sub-brand network into a centralized CRM ecosystem. Built custom interfaces eliminating manual data entry, reducing administrative workload by 20%.

EDUCATION

Master's Degree in Artificial Intelligence — INESDI Business Techschool	Online / Spain 2023 – 2024
Computer Science Engineer (B.S.) — Universidad Espíritu Santo (UEES)	Guayaquil, Ecuador 2017 – 2020

TECHNICAL SKILLS

- Cloud & DevOps:** AWS (EC2, S3, Lambda, Secrets Manager), Railway, Docker, GitHub Actions (CI/CD), Linux.
- Backend Architecture:** Python (Django), Node.js, NestJS, Fabric, REST APIs, Microservices, WebSockets.
- Frontend Ecosystem:** React, Redux, Next.js, Angular, React Native, TypeScript, Tailwind CSS.
- Data Engineering:** SQL (PostgreSQL, MySQL), NoSQL (MongoDB), Databricks, Pandas, Redis.
- Integrations:** Braze, Shopify API, WordPress, Apple/Google Wallet API, Git.
- Retail & Hardware:** RFID (garment tagging, handheld readers), native Android, React Native, in-store deployment.

LANGUAGES

Spanish (native) • English (professional working proficiency)