

Juan David Delgado Guzmán

Senior Software Engineer · Master's in DevOps · AI Engineering
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PROFILE

Senior Software Engineer, AI Engineer and Technical Lead with 5 years of experience designing, building and operating full-stack applications, distributed systems and AI-powered products. Strong background in TypeScript, React, Next.js, Node.js, Supabase, PostgreSQL and Cloudflare Workers. Experienced owning solutions end-to-end, from requirements and architecture to implementation, deployment and production operations. Hands-on experience with MCP, AI agents, asynchronous workflows and AI-assisted development using Claude Code, Codex and Cursor.

99.9%

uptime on PRMS while the architecture kept evolving

~50%

lower client to service latency after the AppSync and MCP work

3

platforms architected end to end as a consultant since 2025

2021

the year I shipped my first production system

EXPERIENCE

Sep 2022 - Present
Alliance of Bioversity International & CIAT
Palmira, Colombia

Senior Software Engineer · Technical Lead (PRMS)

PRMS is the platform CGIAR research centers worldwide use to standardize and report their results, feeding CGIAR's annual reporting to funders. I also contribute to the AI services behind PRMS and its sister platforms (STAR, AICCRA).

- Lead the technical architecture and delivery of PRMS, a global reporting platform used by CGIAR research centers, guiding a four-person engineering team while remaining hands-on.
- Maintained **99.9% uptime** while improving architecture, observability, security and production reliability.
- Part of the team behind the AI document-mining service that turns reports, spreadsheets and audio into structured results for PRMS, STAR and AICCRA, using RAG and Claude on Amazon Bedrock. Worked on its MCP layer, which exposes each product's extraction as an MCP tool so the same pipeline serves several platforms and AI agents.
- Part of the team that delivered PRMS's AI quality-review service (FastAPI, AWS Lambda, Amazon Bedrock and Claude), which grounds every suggestion in the result's own evidence (CGSpace, SharePoint, PDFs, web) and returns auditable field-level proposals.
- Designed the Bilateral API and authentication architecture, integrating external platforms through versioned contracts, SSO, AWS Cognito and passwordless authentication.
- Built distributed microservices and event-driven integrations using NestJS, RabbitMQ, AWS Lambda and EventBridge, including asynchronous processing, retries and failure recovery. Introduced AppSync GraphQL and WebSockets, reducing client-to-service latency by approximately **50%**.
- Optimized MySQL and PostgreSQL workloads and automated backup and restore workflows.
- Contributed to establishing engineering standards for code review, testing, CI/CD and releases, and helped introduce Spec-Driven Development, AI coding agents and automated quality gates.

NestJS · Node.js · FastAPI · Angular · Tailwind CSS · RabbitMQ · AWS · Cognito · MySQL · PostgreSQL · LLM · Bedrock · Claude · MCP · RAG

Apr 2026 - Present

Verzus

Colombia
Consulting

Full Stack Software Engineer

Architecture owner for a production sports booking platform, from the web and mobile apps to infrastructure and third-party integrations.

- Defined the APIs and transactional workflows for reservations, Nequi payments and WhatsApp verification.
- Currently developing the mobile application with Flutter and Dart, integrating booking workflows with backend APIs and Supabase.
- Built resilient async processing with the Outbox pattern, Cloudflare Queues, Email Workers and scheduled jobs.
- Automated delivery across Vercel and Cloudflare: CI validation plus AI reviewer agents on Claude Code, Codex and OpenCode check code, architecture, security and performance before each merge.
- Prototyped conversational and voice AI agents that automate the booking flow.

Next.js · Flutter · Dart · Hono · Supabase · PostgreSQL · Cloudflare Workers · Cloudflare Queues

Jan 2026 - Aug 2026

Ciclonecta

Colombia
Consulting

Full Stack Software Engineer

Designed and owned the architecture of a B2B marketplace across frontend, backend, data and cloud infrastructure.

- Defined domain workflows, service boundaries and consistency rules for listings, offers, negotiations and authentication.
- Implemented reliable delivery with the Outbox pattern and durable queues for retries and failure recovery.
- Shipped conversational and multimodal AI inside real marketplace workflows, not as isolated prototypes.
- Built the marketplace features spec-first with GitHub Spec Kit: each flow, from listings to offers and negotiations, started as a PRD, architecture notes and specs that coding agents (Claude Code, Codex, OpenCode) then implemented and tested.

Next.js · Supabase · PostgreSQL · GCP · Queues · AI agents

Jun 2025 - Dec 2025

Alohados.com

Colombia
Consulting

Senior Backend Developer

Backend lead for a mobile first SaaS for property management and reservations.

- Designed the backend with TypeScript and Hono, using Clean Architecture to keep business logic apart from infrastructure and providers.
- Built secure APIs for users, listings, reservations and payments, including the MercadoPago integration.
- Deployed and monitored services on Cloudflare (D1, R2) with explicit handling for failures and production readiness.

TypeScript · Hono · Node.js · Cloudflare D1 · Cloudflare R2 · MercadoPago

Jan 2023 - Jun 2023

Fundación SARES

Cali, Colombia

Backend Developer

Built a web based inventory and supply management system for a non profit organization.

- Developed backend services with TypeScript, NestJS and TypeORM to improve operational efficiency.
- Designed the MySQL layer with optimized queries and strong data integrity.
- Integrated Amazon S3 for asset storage and set up CI/CD pipelines on Railway.

NestJS · TypeORM · MySQL · Amazon S3 · Railway

Oct 2021 - Dec 2021

AMA Publicidad

Cali, Colombia

Full Stack Developer

Built a custom CRM with a live production chart to manage customers, orders and machinery.

- Created a responsive UI with React and Bootstrap for day to day workflows.
- Implemented a REST API with Node.js and Express on top of PostgreSQL.
- Deployed on AWS EC2 with Firebase Authentication for secure access.

React · Node.js · Express · PostgreSQL · AWS EC2 · Firebase Auth

PROJECTS

mandao beta · MIT	Cali (Colombia) slang for an errand you send someone to run, and expect done right. npmjs.com/package/mandao
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STACK

Languages	TypeScript · JavaScript · Python · Dart · SQL
Backend & systems	Node.js · NestJS · Hono · Express · FastAPI · REST · GraphQL · Microservices
Frontend	Next.js · React · Angular · Flutter
Cloud & infrastructure	AWS · Cloudflare Workers · Vercel · Docker · Kubernetes · Terraform · GitHub Actions
Data	PostgreSQL · MySQL · Supabase · Redis · DynamoDB · MongoDB · OpenSearch
Architecture	Event driven systems · Clean Architecture · Outbox pattern · Async processing · Observability
AI engineering	MCP · AI agents · Tool calling · OpenAI · Amazon Bedrock · Claude · Multimodal AI
How I work	Spec driven development · GitHub Spec Kit · AI reviewer agents · Agent harnesses · Claude Code · Codex · OpenCode · Cursor · CI/CD

EDUCATION

2025 - 2026	Master's Degree in DevOps (Development and Operations) UNIR · Official degree · Thesis on secure microservices automation on Kubernetes
2025 - 2026	Advanced University Program in AI for Software Development and DevOps UNIR · 300 hours · 12 ECTS
2024	<u>AWS Cloud Solutions Architect Specialization</u> Amazon Web Services · Coursera
2017 - 2022	Informatics Engineering Universidad Autónoma de Occidente
2021	<u>Security in Web Application Development</u> Pontificia Universidad Javeriana (edX)
2021	<u>Introduction to Cybersecurity</u> Cisco Networking Academy
2008 - 2015	English Program Colombo Americano