

Ricardo Luis Zuluaga Salazar

Senior Software Architect / Solutions Architect · AI, Backend & Distributed Systems

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Senior Software Architect / Solutions Architect with 10+ years and 12+ production systems (banking, telco, retail, logistics, PropTech). End-to-end ownership: architecture → build → deploy → operate. Focus: Python/FastAPI, agentic AI (RAG, CrewAI, MCP), high availability and distributed backend. Owner of Sígueme 4 (100+ licences, still live), Auge Urbano, LEXIA and Nova. Open to Spain/EU remote or relocation.

EXPERIENCE

Senior Software Architect / Solutions Architect — Medellín Web Soluciones

Jan 2026 – Present

Remote — Medellín, Colombia

- Design and delivery of applied-AI platforms and business systems for Colombia and Spain: architecture, implementation, deployment and operations.
- Nova (lab / orchestration): CrewAI on FastAPI — CEO + 5 divisions + 29 specialists; live SSE, 3D graph, local Ollama, Langfuse, MCP/Composio; 2,749 RAG chunks and 11-subsystem HUD.
- Auge Urbano (augeurbano.com): production Flask PropTech — 159 routes, 45 MySQL tables, CRM, 2 role-distinct AI agents, SEO/AEO/GEO, Bold.
- LEXIA (lexia.medellinweb.co): Legal Intelligence OS — FastAPI + Streamlit + Dash, source-citing RAG, Docker, marketplace and billing.
- MWS AI: SaaS WordPress plugin for WooCommerce 24/7 with live inventory RAG, JWT, WebSockets and human handoff (Growth/Enterprise plans).
- Omnichannel + Woo Colombia: Dropi radar, scoring, HITL panel, Woo publish; Django LMS (Bold+PayPal, RAG tutor); Django CRM (SECOF + finance); reusable pagos_bold library.
- Recurring infra: Docker, Nginx+TLS, VPS/Linux, PostgreSQL/MySQL/pgvector, observability and anti prompt-injection guardrails.

Senior Full Stack Developer — Feeling Company S.A.S.

Jun 2022 – Jun 2026

Colombia (remote)

- Promoted from Full Stack (Nov 2021–Jun 2022) to Senior Full Stack (Jun 2022–Jun 2026).
- B2B systems and national campaigns for Bancolombia, Comfama, Tigo, Nutresa, Noel, Rica, Cunit, Renault and Argos — fixed launches, zero downtime under peaks.
- Warehouse/events CRM in Python: materials inventory, activation logistics and agency ops.
- LEED / B2B Bancolombia–Comfama; budgets and contracts (Tigo in Python; Comfama in Laravel).
- DUX: nationwide prizes with packaging codes, validation and winners.
- Navidad Noel: PHP + JS with 3D animations, mini-games and merch sales at national scale.
- Renault Test Drive (Laravel): leads + scheduling. Cunit and Argos: custom WordPress.
- Stack: Python, Laravel/PHP, WordPress, MySQL, JavaScript, jQuery, Node.js, Linux.

Senior Full Stack Developer — Sígueme 4 & Systram — Carga Control

May 2016 – Mar 2023

Medellín / Itagüí, Colombia

- Sole end-to-end owner of Sígueme 4 (fleet satellite telematics): architecture, backend, frontend, data and deploy.
- 100+ contractual licences at launch; still used by transport companies in Colombia.
- AWS: EC2, RDS (replicas), S3, SNS, SES. Multi-GPS unification; geofencing and deviation/risk alerts.
- Ministry of Transport web services: 15+ automated processes (Systram, Sígueme, Seway).
- LTSA (Grupo Éxito): SAP APIs + custom features. Systram transport CRM: full stack.
- Stack: .NET/C#, LAMP/PHP, SQL Server, MySQL. HA and SPOF removal.

SELECTED PROJECTS

Auge Urbano — PropTech + CRM + 2 agentes IA augeurbano.com

Production real-estate platform: catalogue, commercial CRM, partner/scout portals, finance and 2 AI agents (web advisor + panel copilot with function calling). 159 Flask routes, 45 MySQL 8 tables, ~43k LOC, SEO/AEO/GEO, Bold, anti prompt-injection guards. WebP pipeline –88% weight.

Python Flask MySQL SQLite OpenAI Gemini GA4 Data API Bold Docker pytest Nginx

Nova — Orquestación multiagente (laboratorio) ricardozuluaga.medellinweb.co/es/laboratorio

Operational AI network: CEO + 5 divisions + 29 specialists. FastAPI, CrewAI, 3D graph, SSE, Ollama/LiteLLM, Langfuse, ChromaDB/pgvector, Whisper, edge-tts, OpenCV/YOLO, Composio/MCP. Companion: real-estate lead agent with scoring.

Python FastAPI CrewAI LangChain Ollama LiteLLM Langfuse ChromaDB pgvector Composio MCP Three.js Docker

LEXIA — Legal Intelligence OS lexia.medellinweb.co

Multi-branch legal OS in production: FastAPI API + Streamlit OS + Dash analytics. RAG with mandatory source citation. Client↔lawyer marketplace, GTM tools, Wompi/trial billing. Python-only, demo seed, Docker.

Python FastAPI Streamlit Dash RAG Docker Wompi

MWS AI — Agente WooCommerce SaaS

WP plugin + SaaS backend: 24/7 sales/support with RAG over live stock/sizes/prices, storefront widget, human handoff, JWT/WebSockets, Growth/Enterprise licences (US/Spain agencies).

WordPress PHP FastAPI SQLAlchemy PostgreSQL + pgvector OpenAI JWT WebSockets WooCommerce

Omnicanal + WooCommerce Colombia

Hybrid own-stock + dropship brain: Dropi radar worker, scoring, HITL Jinja/HTMX panel, FastAPI catalogue API, Woo publish. woo-store-co store; Tecnopets vertical.

FastAPI PostgreSQL Redis HTMX WooCommerce REST OpenAI Docker

LMS Claude Architect — curso + pagos

Bilingual Django ES/EN: guest checkout Bold+PayPal (idempotent webhooks), 12-month entitlement, HTMX lessons, RAG AI tutor with rate-limit/cache, 100-question exam, Fast-Track/Mentoring/B2B plans, SEO/GEO/AEO.

Django HTMX PostgreSQL Bold PayPal RAG Tailwind WhiteNoise

CRM operativo MWS + finanzas

Custom Django admin: funnel with KPIs, SECOP II import, scraper/SERP prospects + AI, temperature/territory/probability, quotes, convert-to-client, finance (income/expense/cashflow) in the same hub.

Django Python SECOP MySQL/PostgreSQL IA

pagos_bold — librería Python reusable

Bold payments SDK (third-party, not affiliated with Bold SAS): CheckoutService, IntegrationHealth, bold-console, webhooks/signing, Docker VPS deploy. Plugged into Auge, LMS and other products.

Python Bold Docker Webhooks

Sígueme 4 — telemetría satelital (Carga Control)

Fleet platform: 100+ licences, GPS unification, geofencing, AWS (EC2/RDS/S3/SNS/SES), 15+ Ministry of Transport processes, SAP for LTSA/Grupo Éxito.

.NET/C# PHP/LAMP SQL Server MySQL AWS SAP Web services

NOVA OS LAB

- Orchestration: 5 areas, 29 roles, 35 graph nodes; live execution timeline (SSE).
- Architecture: 13 system topologies documented in-product and versioned in git.
- Cost: ~12.2M tokens and 296 crew calls ≈ USD 29.90 (14-provider cascade + local Ollama).
- Knowledge: 2,749 chunks (nova_knowledge), 6 domain packs, 159 first-party docs; RAG validation.
- Health: 11-subsystem HUD (LLM, STT/TTS, vision, YOLO, toolkits, automations).
- Catalog: 202 MIT open-source profiles across 17 areas mapped to Nova roles.

TECH STACK

Software Architecture, Solutions Architecture, Python, FastAPI, Django, PostgreSQL, Docker, RAG, Agentic AI, CrewAI, MCP, High Availability, Microservices, AWS, Backend Engineering

Frontend	TypeScript · React 19 · Next.js (App Router) · Tailwind CSS · Framer Motion · HTMX · Alpine · JavaScript · jQuery · Three.js · Streamlit · Dash
Backend	Python · FastAPI · Flask · Django · Laravel · Node.js · .NET / C# · PHP (LAMP, WordPress) · APIs REST · Gunicorn
Data	PostgreSQL · MySQL 8 · SQL Server · pgvector · ChromaDB · Prisma · Redis · SQLite · SQLAlchemy
Cloud & infrastructure	AWS (EC2, RDS, S3, SNS, SES) · Docker · Docker Compose · Nginx + TLS · VPS/Linux · WhiteNoise · Git
AI	OpenAI · Google Gemini · Anthropic · RAG / embeddings · CrewAI · LangChain · MCP · Ollama / LiteLLM · Langfuse · Whisper · edge-tts · OpenCV / YOLO · n8n · Composio
Integrations & payments	SAP · GPS / telemetría · Ministerio de Transporte · WooCommerce · Bold · PayPal · Wompi · Google Workspace · GA4 Data API · SECOP · IndexNow
Practices	Arquitectura por capas · Microservicios / HA · Observabilidad · HITL · Geocercas · SEO técnico / AEO / GEO · Guardrails / anti prompt-injection · pytest

CERTIFICATIONS

AI for Work Course — Platzi	Sep 2023
Basic Python Course — Platzi	Mar 2023
SEO for E-commerce — Platzi	Mar 2023

EDUCATION

Universidad de Medellín — university studies	2011 – 2017
2011–2017. Continued with self-directed learning applied in production. Demonstrable credential: 10+ years shipping systems in banking, telco, retail, logistics and PropTech.	

LANGUAGES

Spanish — Native · English — Technical professional (advanced reading/writing; conversational improving)