

Juan David Mahecha Cruz

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[Portfolio](#) | [GitHub](#) | [LinkedIn](#)

PROFESSIONAL PROFILE

Full Stack Engineer with a background in Biomedical Engineering, focused on robust architectures within the JavaScript/TypeScript stack and the building of Artificial Intelligence (AI) agents. Advanced proficiency in frameworks such as Angular and NestJS, with experience integrating LLMs (OpenAI, Gemini, Claude) and orchestrating advanced agents with AWS Bedrock (Amazon Nova, Titan) to boost automation and user experience. Specialist in RPA/RDA, cloud deployment, and serverless architectures, combining engineering precision with software development to build secure and scalable systems. I am a "builder" committed to Clean Code, SOLID principles, and user satisfaction, delivering result-oriented, industrial-grade software through intelligent automation and advanced AI.

TECHNICAL SKILLS

JS/TS Ecosystem:	Node.js, NestJS, Angular (v16-21), React, Astro, TypeScript, JavaScript.
Automation & AI:	AWS Bedrock (Titan Knowledge Bases, agents using Amazon Nova Lite/Pro), AWS Transcribe (voice note transcription for virtual agents with handoff and metrics), Multi-channel AI Agents, LLMs (Claude, Gemini, OpenAI SDK), RPA/RDA (Automation Anywhere), Chatbots.
Tools & Environments:	Ruby on Rails, Python, Electron, ForgeRock (CIAM), WebSockets, SAP Integration.
Cloud & DevOps:	AWS (Lambdas, ECS/ECR - Serverless Architecture, App Runner, Cognito), Docker, DigitalOcean, Linux.
Data & Monitoring:	PostgreSQL, MongoDB, MySQL, SQL Server, Metabase, Grafana.

FEATURED PROJECTS

Blipk Go

2025 - Present | Founder & Lead Architect

<https://blipkgo.com>

- **Overview:** Personal software company and ecosystem I'm building alongside my current job, focused on robust, scalable solutions with local-first architectures and multitenant systems.
- **Product Ecosystem:** Centralizes my own products and technical experiments — including Synapse Kayser and Blipk B — under a single, consistent architecture and brand.
- **Architecture:** Designed for zero-friction adoption: local-first data, multitenant isolation, and a shared services layer reused across every product in the ecosystem.

Blipk B

2025 - Present | Founder & Lead Architect

<https://b.blipkgo.com>

- **Overview:** Cloud Point of Sale (POS) system within the Blipk Go ecosystem, built for small and medium businesses to sell and operate without friction.
- **Core Features:** Product catalog management, personalized sales flows, real-time inventory control, and basic accounting.
- **Architecture:** Built on the same local-first, multitenant foundation as Blipk Go; I own the system architecture, the catalog/inventory data model, and the sales and accounting logic.

Synapse Kayser

March 2026 - Present | Lead Developer & Architect (Full Stack & QA Focus)

<https://dev.blipkgo.com/>

- **Overview:** Built an advanced Load Testing & HTTP Client suite using TypeScript, React, Electron, and SQLite.
- **Stress & Load Testing:** Highly optimized testing engine capable of simulating over 12,000 continuous interactions (efficiently using ~12GB of free RAM) to detect performance bottlenecks under high demand.
- **Workflow Orchestration:** Advanced chained testing with dynamic data-binding and variable capture for complex user flow simulation.
- **AI-Driven QA:** Integration of Groq, OpenAI, and Gemini to analyze latencies/peaks and generate automatic optimization recommendations.
- **Intelligent Reporting:** Automation-ready semantic reports for technical decision-making and quality assurance.

PROFESSIONAL EXPERIENCE

Full Stack Developer (AI Code Reviewer) — Illumia

Bogotá D.C, Colombia

July 2026 - Present

- **AI-Assisted Code Review:** Perform AI-assisted code reviews (AI reviewer), enforcing quality, best practices, and development standards across the team's projects.
- **Functional Analysis:** Translate business requirements into technical specifications for the implementation of AI solutions.
- **AI-Focused Development:** Build AI-focused systems, integrating AI models and workflows into Full Stack applications.
- **Codebase Management:** Continuously improve the codebase, optimizing performance, maintainability, and scalability.
- **Quality Assurance:** Create quality modules (testing and validation) to ensure the reliability of delivered developments.

Senior Full Stack Developer — Fletx

November 2024 - June 2026

Bogotá D.C, Colombia

- **Architecture Design & Full Stack Development:** Led the architecture design and Full Stack development of the fuel distribution management system for client Terpel, supporting over 1,000 active users and 600 destinations; managing the project end-to-end, featuring integrations with SAP, Salesforce, Meta, centralized authentication (CIAM), GPS tracking, and real-time data transmission via WebSockets.
- **Multi-channel AI Agents:** Designed and implemented multi-channel AI agents using Amazon Bedrock (for orchestration and knowledge bases), AWS Nova (Lite & Pro), Amazon Titan, and PostgreSQL; integrating audio-to-text transcription (AWS Transcribe) for voice note processing, reducing management times through a centralized handoff with automated case creation (GLPI), eliminating case dispersion across communication channels, and displaying metrics on a central dashboard with interactive KPIs.
- **Serverless Cloud Infrastructure:** Deployed and managed cloud infrastructure using a Serverless architecture on AWS (ECS, ECR), optimizing continuous delivery and ensuring high scalability through automated CI/CD pipelines.
- **End-to-End Software Solutions:** Developed end-to-end Full Stack solutions utilizing Angular, Node.js (NestJS), and performed corrective/evolutionary maintenance on systems based on Ruby on Rails.

Freelance Full Stack Developer — Jiménez & Jiménez Abogados Asociados

September 2023 - Present

Bogotá D.C, Colombia

- **End-to-End Construction & Automation:** Independently created a comprehensive, autonomous risk assessment system that reduced operating costs by 75% by automating searches and simplifying daily operations. Developed the processing engine in NestJS and dynamic dashboards in Angular with real-time updates via WebSockets.
- **Data Engineering & AI:** Programmed advanced Web Scraping systems with Puppeteer and integrated the OpenAI SDK for automated extraction and risk analysis based on transactional behavior, eliminating manual search processes.
- **Advanced Analytics:** Implemented visualization layers using Metabase and Grafana to enable data-driven legal decision-making.

Web Developer — Issatec / Tevez Colombia

July 2023 - March 2024

Bogotá D.C, Colombia

- Developed MyHome, a home-care health platform using Angular and Ionic.
- Automated clinical data extraction using Automation Anywhere and ChatGPT.

Freelance Developer — Be Trainer

March 2023 - May 2024

Tocancipá - Cundinamarca, Colombia

- Built a Full Stack scheduling system (Angular, Ionic, Node.js) including full management of a dedicated server.

Intelligent Automation Mid Developer — Teleperformance

April 2022 - May 2023

Bogotá D.C, Colombia

- **Full Stack Development & Automation:** Led technical development of intelligent automation solutions using Node.js/Express and Angular, integrated with SQL Server and IIS for complex process orchestration.
- **Blockchain & Service Consoles:** Developed blockchain-based platforms for digital certification generation and administrative service systems.
- **Python & Data Processing:** Implemented Python backends for OCR consumption, automatic file classification, and image pre-processing to optimize automation workflows.
- **RPA Engineering:** Developed high-impact bots for Cemex and Zipcar, including a specialized training platform via WhatsApp Business.

Intelligent Automation Jr. Developer — Teleperformance

March 2021 - April 2022

Bogotá D.C, Colombia

- **Chatbot Construction:** Built intelligent conversational agents using Flow.ai and Yellow.ai, with Node.js backend orchestrators to trigger Automation Anywhere workflows.
- **AI POCs:** Developed proof-of-concepts (POCs) using Angular and AI for reCAPTCHA resolution and automated data validation.
- **RPA Bots (AA360):** Created automated processes focused on improving operational efficiency.

Jr. Software Engineer — Ingenian Software

July 2020 - February 2021

Bogotá D.C, Colombia

- Developed the web application for the National Short Story Contest 2020 (Ministry of Education) using Angular and Drupal.

Biomedical Technology Support Engineer — Compresores y Servicios C.R.

March 2019 - March 2020

Bogotá D.C, Colombia

- Regulatory management (INVIMA) and specialized maintenance of biomedical equipment.

EDUCATION

- B.S. in Biomedical Engineering | Universidad Manuela Beltrán | Jan 2013 - Dec 2018.
- Diploma in Applied Epidemiology for Biomedical Engineering | Universidad Manuela Beltrán | Jun 2018 - Jul 2018.
- Full Stack Development Bootcamp | Bictia / BIT | Jan 2020 - Jul 2020.

CERTIFICATIONS & AWARDS

Professional Engineering License (COPNIA) | Issatec's Best of 23 (Rookie of the Year) | Teleperformance Special Projects Recognition.

LANGUAGES

- **Spanish:** Native
- **English:** B2 (Certified) | Working toward C1