NICOLAS MOLINA

SENIOR SOFTWARE ENGINEER

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PROFILE

Senior Software Engineer with over 13 years of experience delivering scalable, user-centric products across both frontend and backend systems. I excel in leading architecture and execution, particularly in distributed systems and event-driven design, leveraging technologies such as FastAPI/Python and Node.js. My expertise extends to integrating LLMs and voice AI, enhancing user experiences through innovative solutions. Recognized as a Google Developer Expert and Microsoft MVP, I have a proven track record of building robust, efficient systems that align with business goals and elevate user experience. My work involves collaborating cross-functionally to ensure seamless feature delivery and system performance at scale.

PROFESSIONAL EXPERIENCE

Senior Software Engineer, dotCMS   May 2024 — Present
Remote, USA

- Enhance the dotCMS platform by leading the design and development of scalable features, ensuring alignment with R&D and product goals. Focus on improving performance and reliability through efficient code contributions and collaboration.
- Developed scalable and reusable components to enhance performance and maintainability.
- Led troubleshooting efforts to quickly resolve issues and improve system reliability.
- Owned the SDLC (development, testing, deployment support, and post-release improvements) phases, ensuring timely delivery of user-facing features.

LangGraph for AI Agents Instructor, Platzi   Sept 2025
Remote, Colombia

- Authored and delivered the specialized "LangGraph for AI Agents" curriculum, defining best practices for building stateful, autonomous workflows. Teaches advanced patterns for orchestrating multi-agent systems and managing application state reliability.
- Instructs senior developers on integrating LLMs into production-grade backend architectures, focusing on fault tolerance, tool usage, and scalable design patterns.
- Translates complex engineering concepts—including distributed systems logic and scalable backend strategies—into actionable, high-quality code implementations for the developer community.

Senior Full-Stack Developer, Platzi   May 2023 — Jan 2024
Remote, Colombia

- Architected and scaled "Ada," the AI Tutor, to support 6,000+ concurrent students with low latency. Built a distributed, serverless infrastructure using HonoJS on Cloudflare Workers (Edge Computing) to ensure high availability and operational stability.
- Engineered the LLM orchestration layer using LangChainJS, integrating GPT-4 and RAG (Retrieval-Augmented Generation) techniques. Optimized prompt engineering workflows to deliver precise, context-aware educational support.
- Led the backend development of the English Placement Test using Python (FastAPI). Implemented a Computerized Adaptive Testing (CAT) algorithm and the Whisper Model for accurate voice analysis and automated scoring.

Full Stack Developer, Platzi   Jun 2020 — May 2023
Remote, Colombia

- Engineered a high-performance, browser-based code execution environment ("Coding Playground"). Leveraged Pyodide (WebAssembly) to run full Python kernels client-side, significantly reducing backend computational load while enabling secure, interactive challenges for Python, SQL, and JavaScript.
- Designed and maintained the "Platzi Fake Store API," a public, high-availability RESTful service used by the developer community for e-commerce prototyping. Ensured strict API contract reliability and scalable data delivery.
- Spearheaded the backend architecture for the Platzi Master Platform using NestJS and PostgreSQL. Designed complex relational database schemas to capture high-volume analytics on student-mentor interactions, ensuring data integrity and query performance.

- Orchestrated CI/CD pipelines using Docker and GitHub Actions, automating deployment workflows and ensuring environment consistency across development and production.

Senior Developer, Lulla Care   **Apr 2020 — Jun 2020**

Remote, Spain

- Integrated an on-device AI inference engine using TensorFlowJS to process real-time audio streams. Trained and fine-tuned custom classification models to detect specific sleep patterns with high accuracy.
- Optimized the application architecture to handle heavy Machine Learning workloads directly on the mobile side (Edge AI), balancing high-performance inference with efficient resource utilization.
- Transformed raw audio telemetry into actionable data insights for parents, enhancing the core value proposition through reliable AI-driven features.

Technical Lead & Full-Stack Developer, T2M Holding   **Mar 2019 — Mar 2020**
LLP

Remote, Colombia

- Led the engineering of enterprise-grade Conversational AI agents for healthcare and real estate sectors. Integrated Microsoft Bot Framework and Azure LUIS for precise intent recognition and entity extraction, establishing robust NLP workflows.
- Designed and maintained a distributed container orchestration system using Docker Swarm. Implemented CI/CD pipelines (GitLab) to balance rapid feature delivery with high code quality and system stability.
- Architected the data persistence layer using Couchbase (NoSQL) and MapReduce to process high volumes of interaction logs, enabling real-time analytics and business insights.

EDUCATION

UNIMINUTO   **Jan 2010 — Jan 2015**

Tecnólogo en Informatica, Colombia

CERTIFICATIONS

Google Developer Expert   **Jul 2019 — Present**

Google Developers Experts(GDEs) are experienced, recognized developers of Google technologies. They distinguish themselves through frequently speaking at conferences, share their passion and experience by publishing videos and tutorials, writing code samples, mentoring developers and startups and much more. Thanks to their support, developers, high-potential startups and technical communities around the world build and launch highly innovative apps.
Categories: Angular & Web

Microsoft Most Valuable Professional   **Apr 2022 — Present**

Microsoft Most Valuable Professional (MVP) award recognizes exceptional technical community leadership and outstanding contributions in the technical communities.
Category: Developer Technologies

LANGUAGES

Spanish (Native), English (B1+)

TECHNICAL SKILLS

Prompt Engineering	Event-Driven Architectures	Distributed Systems	SQL / NoSQL
Message Queues	Serverless	LangGraph / LangChain	FastAPI/Python
NodeJS	NextJS/React	Docker / Docker Swarm	GitHub Actions
JavaScript/TypeScript	Celery/Redis		

LINKS

LinkedIn, Porfolio