

JUAN DIEGO RAMÍREZ

SOFTWARE ENGINEER | AI ENGINEERING, LLM INTEGRATIONS & BACKEND SYSTEMS

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PROFESSIONAL SUMMARY

Software Engineer with 3+ years of experience building backend services, enterprise modules, APIs, reporting workflows, and business automation across oil and gas, logistics, financial services, and internal platforms. Hands-on experience with the OpenAI API, Claude, Codex, prompt engineering, and structured outputs, including AI-assisted workflows that combine validation, scheduled or on-demand execution, and human oversight. Strong backend foundation in Node.js, TypeScript, C#, ASP.NET, Laravel, SQL, MongoDB, Docker, secure access control, deployments, and code review.

AI ENGINEERING PROFILE

- LLM integrations: OpenAI API, structured outputs, prompt engineering, and AI-assisted business workflows.
- Controlled automation: validation, human-in-the-loop review, scheduled or on-demand execution, and PDF and Excel reporting.
- AI-assisted development: Claude and Codex, complemented by training in software engineering with generative AI agents.

TECHNICAL SKILLS

Backend: Node.js, TypeScript, Express, C#, ASP.NET, Laravel, Prisma

Architecture & Security: REST APIs, modular design, microservices, API integrations, secure authentication, RBAC

Data & Delivery: SQL Server, MySQL, MongoDB, Docker, Git, scheduled jobs, deployments, code reviews, PDF and Excel reporting

PROFESSIONAL EXPERIENCE

PETROWORKS | Software Developer | Jan 2025 - Present

- Lead three developers, coordinating technical decisions, code reviews, maintenance, and continuous improvement across enterprise operational platforms.
- Modernize Excel- and email-based workflows by centralizing access to real-time operational data.
- Integrate ERP, asset management, and internal business systems for real-time queries, cross-functional reporting, and operational analysis.
- Build backend services, reporting workflows, and controlled AI-assisted automation with validation, role-based access, and human oversight.

GROWNNET UK | Backend Developer | Mar 2024 - Dec 2024

- Developed Laravel and MySQL endpoints for order management and logistics workflows.
- Implemented modular service boundaries and integrations that made business processes easier to extend and maintain.

PWC COLOMBIA | IT Consulting Intern | Sep 2023 - Feb 2024

- Supported digital transformation projects for financial services clients by translating process needs into practical technical solutions.
- Automated repetitive internal work with scripts and custom tools while collaborating in Agile teams.

QUANTICOM VALLEY | Backend Developer | Jun 2023 - Dec 2023

- Built Express and MongoDB data pipelines and API endpoints for internal platform workflows.
- Contributed to backend optimization, code reviews, deployments, and process improvement.

EDUCATION & PROFESSIONAL DEVELOPMENT

Education: National University of Colombia | B.Sc. in Systems and Computing Engineering | 2019 - 2025

Professional Development: Software Engineering with Generative AI Agents; Algorithmic Thinking I & II

Languages: Spanish (Native); English (B2, Upper Intermediate)