

01 SENIOR SOFTWARE & AI ENGINEER

Diego
Alvarez.

Production AI systems, cloud-native architectures, and the engineering discipline that ships them.

Based in Medellín, Colombia



AI AGENTS · LLM INTEGRATION · CLOUD ARCHITECTURE · CI/CD & DEVOPS · FULL-STACK ENGINEERING

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02 Profile

Senior Software & AI Engineer with 5+ years designing microservices, cloud-native systems and production AI agents. I integrate large language models into real workflows, ship autonomous agents with CrewAI, and architect CI/CD pipelines that move teams from manual releases to confident, daily deployments.

Currently focused on autonomous AI workflows and scalable cloud architectures across AWS and Azure — Python, FastAPI, React and TypeScript are my daily tools. I value clear thinking, well-tested code, and engineering decisions that age well.

03 Experience

2024

↓

now

MARCH 2024 — PRESENT

Senior Software & AI Engineer

Choucair Testing · Medellín

Leading AI integration and cloud architecture for enterprise QA platforms.

- Architected CI/CD pipelines in Azure DevOps for multiple enterprise clients, dramatically accelerating release cycles and eliminating manual deployment gates
- Led integration of LLMs (GPT-4, Claude API) into production log analysis workflows, substantially reducing the time needed to detect critical incidents
- Designed autonomous AI agents with CrewAI to automate QA workflows end-to-end, significantly boosting testing efficiency and removing manual overhead
- Engineered microservices architecture on AWS (Lambda, EC2, S3) serving large-scale daily traffic with seamless horizontal scaling
- Built an ML-powered cloud anomaly detection system that predicts infrastructure failures before they reach production impact
- Developed a Python / FastAPI API Gateway centralizing microservices with OAuth2 and full OWASP Top 10 compliance
- Led high-concurrency enterprise frontend with React + TypeScript + Vite, delivering peak-load performance for major corporate clients

04 Skills

// ai / machine intelligence

LLM Integration (GPT-4, Claude API)

AI Agents (CrewAI) Generative AI

Prompt Engineering

RAG (Retrieval-Augmented Generation)

// backend engineering

Python FastAPI Node.js

TypeScript JavaScript NestJS

Express.js Django / DRF

REST APIs Microservices

// frontend

React.js Next.js Vite

TypeScript

// cloud & devops

AWS (Lambda, EC2, S3, CloudFormation)

Microsoft Azure

Google Cloud & Firebase

CI/CD (Azure DevOps, GitHub Actions)

Docker

// data

PostgreSQL MongoDB

// tooling & methods

Git / GitHub / GitFlow

Agile / Scrum Shopify API

WhatsApp Business API

2023
↓
2024
DECEMBER 2023
— MARCH 2024

Full Stack Engineer

Xilindro Sport · Medellín

E-commerce engineering across Shopify, Node and real-time inventory.

- Built Shopify + Node.js e-commerce integrations from scratch, optimizing checkout and measurably lifting conversion
- Automated the electronic invoicing pipeline with PDFKit, drastically reducing administrative processing time
- Created a real-time MongoDB inventory service that brought stock accuracy to near-perfect levels and eliminated overselling incidents
- Deployed a WhatsApp Business API bot handling hundreds of daily customer interactions with zero downtime
- Integrated Stripe supporting multiple currencies, processing meaningful monthly transaction volume securely
- Built a React + Chart.js analytics dashboard replacing weekly manual reports with real-time business metrics

2021
↓
2023
JULY 2021 —
OCTOBER 2023

Senior Full Stack Engineer

Comfama · Medellín

Enterprise React platform — one of Colombia's largest social welfare networks.

- Developed an enterprise React / TypeScript platform serving tens of thousands of active users with near-perfect uptime — one of Colombia's largest social welfare digital platforms
- Built a shared component library of 40+ reusable React components, substantially cutting cross-team development time
- Led the architectural migration from monolith to microservices with Docker, enabling independent deployments and stronger fault isolation
- Implemented WCAG 2.1 Level AA accessibility standards, measurably expanding platform reach to users with disabilities
- Drastically improved page load speed via lazy loading, code splitting and CDN optimization
- Delivered zero security breaches after implementing a full OWASP Top 10 security framework
- Integrated Contentful and Strapi headless CMS, reducing content update cycles from days to minutes
- Led the deployment team, establishing CI/CD pipelines and Git versioning standards adopted organization-wide

2020
↓
2021
NOVEMBER 2020
— JULY 2021

Full Stack Developer

Toptal · Remote

Top 3% global developer network — async delivery for international clients.

- Selected as part of Toptal's top 3% global developer network after a rigorous technical screening
- Delivered full-stack solutions for multiple international clients using Django + React, fully async across time zones
- Designed and optimized PostgreSQL schemas and MongoDB models for high-volume client applications on Google Cloud
- Built custom data segmentation models for marketing automation, improving campaign targeting and conversion
- Shipped consistently and on time in a fully remote async environment — strong ownership and clear communication

05 Education

Ingeniería de Sistemas

Universidad Nacional Abierta y a Distancia — UNAD

CLASS OF 2026

Focus on Software Architecture & Distributed Systems

Técnico en Desarrollo de Software

Servicio Nacional de Aprendizaje — SENA

CLASS OF 2019

Software Development & Web Applications

06 Languages

English

Professional Working Proficiency

Spanish

Native / Bilingual

07 Certifications

Data Analysis with Python

IBM · via Coursera

2025

🔗 Verify credential ↗

Python for Data Science

FRACTAL · via Coursera

2025

🔗 Verify credential ↗

Crash Course on Python

Google · via Coursera

2025

🔗 Verify credential ↗

08 Community

NodeCo

Co-Organizer

JUNE 2019 — MARCH 2023

Co-organized Colombia's largest JavaScript community for nearly 4 years — events, workshops and meetups

GDG Medellín

Volunteer

OCTOBER 2019 — JANUARY 2022

Google Developer Group Medellín — tech events, cloud workshops and community outreach

2020**2021**NOVEMBER 2020
– JULY 2021

Full Stack Developer — Contract

Freelance · Remote

Independent contracts for early-stage startups.

- Designed and optimized PostgreSQL schemas for multiple startups, supporting rapid data growth with sub-second query performance
- Developed scalable RESTful APIs with Django REST Framework handling high-volume daily traffic
- Implemented a hybrid SQL / NoSQL architecture (PostgreSQL + MongoDB), reducing infrastructure costs and optimizing query performance
- Configured Linux servers (Ubuntu / CentOS) with load balancing and auto-scaling, ensuring high availability

2020FEBRUARY 2020
– NOVEMBER
2020

Junior Software Developer

O.S Group · Medellín

Cross-platform mobile and internal tooling.

- Developed cross-platform mobile apps with the IONIC framework for transport-industry clients, substantially reducing manual workload
- Implemented automated inventory and accounting systems, drastically cutting administrative errors
- Applied technical SEO strategies that achieved measurable organic traffic growth across multiple client websites
- Established preventive maintenance protocols and monitoring systems, substantially reducing system downtime
- Designed UX-centered interfaces following best practices, measurably improving user satisfaction

2019**2020**JUNE 2019 –
FEBRUARY 2020

Backend Developer — Intern

PSL (now Perficient) · Medellín

Launched my career at one of Colombia's top consultancies serving Fortune 500 clients.

- Launched my career at PSL, one of Colombia's top software consultancies serving Fortune 500 clients
- Built and maintained REST APIs in Python / Django for inventory management systems integrated into enterprise retail platforms
- Designed relational database schemas in PostgreSQL optimized for high-volume transactional data
- Worked in Scrum teams — sprint planning, code reviews and daily standups