

Andrés Felipe Nieto Gutiérrez

Full Stack Developer · API Integrations & Process Automation · IoT Systems
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[andresfel1pe410.github.io/Portafolio](https://github.com/andresfel1pe410/Portafolio)

PROFESSIONAL SUMMARY

Full Stack Developer with 3+ years building production-grade systems — sole engineer on a full ERP (5,800 lines Python / 11,800 lines TypeScript, 72 automated tests, 32 versioned SQL migrations). Hands-on with enterprise auth (OAuth 2.0/OIDC, Microsoft Entra ID), IoT integration (ESP32 + biometric hardware), and business process automation. Final-year Mechanical Engineering student at Universidad Nacional de Colombia. ML & Data Science diploma (5.0/5.0). Open to remote, part-time, and freelance opportunities.

PROFESSIONAL EXPERIENCE

- Full Stack Developer — ERP System** · [Colombiana de Válvulas y Rejillas SAS](#) 2022 – Present | Bogotá · Freelance
 - Backend & performance:** sole engineer on a full ERP in production (sales, inventory, delivery notes, production planning, HR) — Clean Architecture backend: FastAPI + SQLAlchemy 2.0 + Pydantic v2, Uvicorn 4-worker; reduced a critical screen from ~500 SQL queries to 1 by fixing N+1 patterns.
 - Frontend, security & testing:** modular React 18 + TypeScript frontend (feature-based architecture, TanStack React Query, Zustand, TailwindCSS); RBAC via FastAPI dependencies + Row Level Security on all PostgreSQL tables — dual-layer auth; 32 versioned SQL migrations, 72 Pytest tests covering business rules and full role-permission matrix.
 - IoT & infrastructure:** integrated ESP32 microcontroller with biometric fingerprint reader (AS608) and touchscreen (ILI9341) for real-time attendance tracking — C++ firmware through to live dashboard in the SPA; redesigned connection pooling (SQLAlchemy + Supabase PgBouncer) for concurrent multi-user load.
- Full Stack Developer** · [Intelisoft Software](#) Feb – May 2026 | Colombia · Remote · Part-time
 - built multi-level approval workflows with full document traceability for Cenit (Hydrocarbons Transport & Logistics); implemented Microsoft Entra ID SSO via OAuth 2.0/OIDC; led legacy database migration preserving full audit history; delivered architecture diagrams, API specs, and deployment guides under Agile/Scrum.
- Sales Pipeline Automation** · [Client: Google — Commercial Direction](#) May – Aug 2026 | Remote · Freelance
 - designed and deployed an end-to-end sales-tracking system (AppSheet + Google Apps Script) that flagged closed deals with no cloud consumption started — replacing fully manual tracking with automated, real-time revenue-risk alerts for the commercial director.

SELECTED PROJECTS

- Personal Portfolio** · andresfel1pe410.github.io/Portafolio 2026 | Vanilla HTML · CSS · JS
 - bilingual (ES/EN) SPA with zero dependencies: Canvas 2D particle background, IntersectionObserver scroll animations, cursor parallax (rAF), runtime i18n toggle, lazy images, Open Graph tags, GoatCounter analytics — deployed on GitHub Pages.
- Book Recommendation Engine** · [ML / NLP](#) 2024 | Python · scikit-learn
 - applied NLP to Amazon review data for supervised book classification, achieving above-baseline accuracy; separate project analyzed Bogotá cardiovascular mortality (DANE datasets) with pandas, matplotlib, and seaborn.

TECHNICAL SKILLS

Backend	Python · FastAPI · SQLAlchemy 2.0 · Pydantic v2 · .NET (C#) · Node.js · REST APIs	Frontend	React 18 · TypeScript · Vue 3 · Vite · TanStack Query · Zustand · TailwindCSS
Auth & Security	OAuth 2.0/OIDC · Microsoft Entra ID · JWT/JWKS · RBAC · Row Level Security	Database	PostgreSQL · SQLAlchemy · Supabase · Firebase · versioned migrations
IoT & Hardware	ESP32 · C++ (Arduino) · biometric sensors · hardware-to-backend integration	Automation	AppSheet · Google Apps Script · Google Workspace · n8n (learning)
Data & ML	pandas · scikit-learn · matplotlib · seaborn · NLP · supervised classification	Testing & DevOps	Pytest · ESLint · Docker · Railway · Vercel · Git/GitHub · CI/CD
AI Dev Tools	Cursor AI · Windsurf · GitHub Copilot	Languages	Spanish (native) · English B2 — EF SET Certified

EDUCATION & CERTIFICATIONS

B.Eng. Mechanical Engineering — 9th/10th semester
Universidad Nacional de Colombia · Bogotá · 2020 – Present

Diploma · Machine Learning & Data Science · Grade: 5.0 / 5.0
Universidad Nacional de Colombia · Aug – Dec 2025 · 192 hrs