

Nicolás Peña Irurita

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Professional Summary

- Data and Artificial Intelligence Engineer specializing in the development, integration, and orchestration of **AI agents and multi-agent systems** for automation, analytics, and intelligent business operations.
- 3+ years of experience in ERP implementation, data pipeline design, and process automation using Python, SQL, and modern AI frameworks.
- Passionate about **Generative AI, conversational systems, and intelligent automation**, bridging technical solutions with organizational strategy and measurable impact.

Professional Experience

Data Analyst — VIP Carwash (Automotive Aesthetics)

Jan 2023 – Jan 2025

- Designed and deployed **AI-powered agents connected to SQL databases** to automate customer scheduling and real-time service tracking.
- Built and maintained **ETL pipelines** integrating sales, operations, and CRM data.
- Developed executive dashboards (Power BI / Dash) to monitor customer frequency, revenue, and service efficiency.
- Applied **machine learning models** to forecast demand and optimize staff allocation, improving operational efficiency.

Independent Data & AI Consultant — Freelance

Jan 2023 – Present

- Developed and integrated **cognitive and multi-agent systems** using OpenAI API, LangChain, and LangGraph, connected to ERPs, CRMs, and SQL databases.
- Automated enterprise processes using Python and **n8n**, building no-code workflows with advanced logic and self-hosting.
- Designed and maintained data pipelines for MySQL, SQL Server, and SAP HANA; provided consulting on data modeling and data quality assurance.
- Delivered technical training on BI, data visualization, and AI-driven reporting automation.

Data Analyst (Healthcare) — EPS Delagente Comfenalco Valle

Aug 2025 – Present

- Led the automation of **clinical and administrative data management** through Big Data architecture and Python.
- Developed an **AI analytical agent** capable of answering natural-language queries based on operational metrics.
- Built centralized databases for medical orders, prescriptions, and regulatory compliance, ensuring consistency and traceability.

Highlighted Projects

- **WhatsApp AI Agents with OpenAI:** Implemented Twilio + OpenAI integration with a real-estate database to automate property searches and quotations, reducing response time by 50%.
- **Music ETL & Analytics Dashboard:** Built a complete ETL pipeline in Python using Docker Compose (Airflow, PostgreSQL, Redis) and a Dash/Plotly analytical dashboard.
- **Industrial Safety Computer Vision:** Designed a YOLOv8 + MediaPipe system for PPE detection and fall alerts, integrated with Grafana/InfluxDB.
- **Global Happiness Prediction:** Created regression models using scikit-learn, Kafka streaming, PostgreSQL storage, and Superset dashboards for socio-economic research.

Education

B.Sc. in Data and Artificial Intelligence Engineering — Universidad Autónoma de Occidente

High School Diploma — Cali, Colombia

Technical Skills

- **ERP & Business Systems:** SAP ERP, Oracle E-Business Suite, Microsoft Dynamics 365, NetSuite, Odoo.
- **Databases & Data Warehousing:** PostgreSQL, MySQL, Oracle, SQL Server, MongoDB, Redis, Neo4j, Cassandra, Elasticsearch.
- **Programming:** Python, SQL, JavaScript/Node.js, Scala, Java (Apache Spark).
- **AI & Agents:** OpenAI API, LangChain, LangGraph, Agents SDK, RAG, embeddings, Perplexity, DeepSeek-R1, Grok, ElevenLabs.
- **Big Data & Cloud:** Spark, Kafka, Beam, Flink, Hadoop; GCP, AWS, Azure, Databricks, MLflow.
- **Orchestration & ETL:** Apache Airflow, NiFi, Luigi, Talend, cron-jobs, streaming ETL.
- **Automation Tools:** n8n, Zapier, Make (Integromat).
- **DevOps:** Docker, Kubernetes, Terraform, CloudFormation, Serverless; FinOps.
- **Computer Vision:** OpenCV, PyTorch, TensorFlow, YOLO, Detectron2.
- **BI & Visualization:** Power BI, Dash, Plotly, Superset.

Soft Skills

- Agile leadership (Scrum, Kanban, Lean) and OKR-based management.
- Effective communication with technical and non-technical stakeholders.
- Critical thinking, problem solving, and technical mentoring.
- Adaptability, resilience, and continuous learning in dynamic environments.

Languages

- Spanish — Native
- English — C2 (Technical)
- Portuguese — B2

Volunteer Work

• **Rotary International:** Active member of Interact and Rotaract — Rotary Club Cali (since 2022).

• **Asociación Santa Cruz:** Volunteer for child outreach programs in Bahía Solano (Dec 2023).

References

Cristian Ruiz Irurita — Manager, VIP Carwash Servicentro
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