

# Nicolás Peña Irurita

Cali, Colombia

nicoritabarona@gmail.com +57 302 664 3175

[LinkedIn](#) [GitHub](#)

## About Me

- 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.
- 2+ 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 impact.

## Professional Experience

### Data Analyst — VIP Carwash (Automotive Aesthetics)

- 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 sources.
- Created executive dashboards (Power BI / Dash) to monitor client frequency, revenue, and service efficiency.
- Applied **machine learning models** to forecast demand and optimize staff allocation, improving operational efficiency.

### Independent Data & AI Consultant — Freelance

- 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 pipelines for MySQL, SQL Server, and SAP HANA; provided consulting on data modeling and quality assurance.
- Delivered technical training on BI, data visualization, and AI-driven reporting automation.

### Data Analyst (Healthcare) — EPS Delagente Comfenalco Valle

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

## Highlighted Projects

- **WhatsApp AI Agents with OpenAI:** Implemented Twilio + OpenAI integration with a real-estate database to automate property searches and quotes in natural language, reducing response time by 50%.
- **Music ETL & Analytics Dashboard:** Built a full Python ETL pipeline with Docker Compose (Airflow, PostgreSQL, Redis) and a Dash/Plotly dashboard to analyze music trends.
- **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 with 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 (Remote/Evening Program)

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 fast-changing 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  
Tel: +57 602 370 0090 · Cali, Colombia

**Sandra Patricia Mosquera Losada** — Director, Data & AI Engineering Program (UAO)  
Tel: +57 602 3188000 Ext. 11365 · spmosquera@uao.edu.co

**Julián Hurtado López** — Professor of Statistics and Neural Networks (UAO)  
Tel: +57 602 3188000 Ext. 11466 · jhurtado@uao.edu.co