Adrián Pabón Mendoza

Barranquilla, Atlántico, Colombia | adrianpabonmendoza@gmail.com | +57 323 225 7331 | LinkedIn

Professional Summary

Electronic Engineer and researcher (Cum Laude, Universidad del Norte) passionate about building technology that solves real-world problems. Specialized in Computer Vision, AI solutions, and Large Language Models (LLMs). Experienced in deploying scalable cloud applications (AWS, IBM, Oracle) and designing intelligent systems that optimize operational workflows.

Experience

Optimize IT SAS — Barranquilla, Colombia
AI Product Specialist — *July 2024 – Present*

- Improved shoplifting detection in micro-market systems using Computer Vision, saving 80% of the time previously spent on manual camera review.
- Developed serverless automation scripts on Oracle Cloud to streamline database backups, significantly reducing manual maintenance time and error rates.
- Lead AI and Data projects by designing and deploying APIs for language models and RAG systems using Python and SQL.
- Enhance AI capabilities through vector databases, embeddings, and fine-tuning of language models for optimized performance.

Universidad del Norte — Barranquilla, Colombia
AI Researcher and Developer — *Jan. 2024 – Nov. 2025*

- Developed and scaled NAIA (Nimble Artificial Intelligence Assistant) from a pilot of 500 users to a production system serving over 13,000 students.
- Optimized time management for university administrators by offloading routine student queries to NAIA, allowing staff to focus on complex consultations.
- Designed the system's modular monolithic architecture, integrating OpenAI LLMs, Redis for state management, and external services via Microsoft Azure.
- Integrated NAIA with the institutional ecosystem via Microsoft Graph API, enabling secure access to email, calendar, and authentication services.

Publications & Research

NAIA: A Robust AI Framework for Academic Assistance | *Systems* — 2025
- Published in Systems, vol. 13, no. 12. Proposed a robust AI framework for multi-role virtual academic assistance.

Architectures for AI-Powered Virtual Assistants | *IEEE TEMSCON LATAM* — 2025
- A comparison of different architectures for AI-powered virtual assistants presented at the 2025 TEMSCON conference.

NAIA: A Multi-Technology Virtual Assistant | *IEEE Access* — 2025
- Published in IEEE Access, vol. 13. A case study on boosting academic environments using multi-role AI assistants.

Itinerary Assignment Optimization | *IEEE COLCOM* — 2024
- Comparative analysis of different optimization approaches for operational efficiency in itinerary assignment.

Education

Universidad del Norte — Barranquilla, Colombia
Electronic Engineering (Cum Laude Distinction) — *2020 – 2025*

Certificates & Recognitions

Certificates: Databricks Fundamentals (2025), Applications of AI for Anomaly Detection (NVIDIA, 2025), Generative AI with Diffusion Models (NVIDIA, 2025)
Awards: Best Science Project (Colciencias, 2019), Speaker at Cátedra Europa 2024 ("Computer Vision: Un mundo de posibilidades").

Skills

Languages: Spanish (Native), English (Professional/B2+)
AI & Data: Python (Scikit-Learn, Pytorch), Computer Vision, RAG, Fine-Tuning, Hugging-Face, LLMs, OpenAI API.
Cloud & DevOps: AWS (EC2, S3, RDS), IBM Cloud, Oracle Cloud, Azure, Docker, SQL.
Tools: N8N, ElevenLabs, Roboflow, Flask.