



# Nicolás Argota

AI Engineer | Data Scientist | PhD in Engineering

📍 Argentina








## About me

AI Engineer and Data Scientist with 8+ years of experience designing, training, and deploying machine learning solutions in production. Specialized in NLP, LLM-based systems, semantic search, predictive analytics, and cloud architectures on AWS and GCP. I have led projects across the public sector, legal-tech, and agri-tech, combining technical depth with business impact.

## Tools

Python AWS GCP SQL PyTorch TensorFlow FastAPI Streamlit Reflex Pandas MCP

## Experience

-  **Poder Judicial de Tucumán** Sep 2023 - Present  
AI Engineer  
Led the end-to-end delivery of legal-tech AI solutions with LLMs (GPT, Gemini, Llama) and LangChain, from architecture to production rollout. Built semantic jurisprudence search with BigQuery and Pinecone, integrated into institutional APIs and chatbots to speed up legal information retrieval. Implemented AI agents for classification, routing, summarization, and document analysis, reducing manual workload and improving response consistency across teams.
-  **Revolt Digital** Nov 2024 - May 2025  
Python Developer  
Built scalable social media intelligence pipelines on a hybrid AWS-GCP stack to transform high-volume data into actionable insights. Improved analytical performance by optimizing BigQuery workloads and implementing semantic/vector search with Elasticsearch. Delivered production APIs with FastAPI and deployed microservices on Cloud Run, increasing automation and reducing operational friction in data workflows.
-  **Articae** Apr 2023 - Sep 2023  
AWS Solution Architect  
Designed and implemented AWS data architectures to support scalable analytics and stronger data governance standards. Established orchestration and cloud integration workflows that improved reliability, traceability, and maintainability of critical data processes. Delivered executive dashboards and reporting assets that accelerated monitoring and improved decision-making cadence.
-  **Sanzar** Feb 2022 - Sep 2022  
Data Scientist & Software Engineer  
Developed a machine learning model to optimize nutrient distribution in crops, generating up to 15% savings in production costs. Productionized the solution on AWS (Lambda, S3, PySpark, Flask) to ensure operational adoption in real workflows. Presented results at Madrid Innovation Food and contributed to the startup's EUR 200K fundraising round.
-  **Telecommunication Lab - UNT, Argentina** Aug 2017 - Sep 2021  
AI Researcher  
Researched reinforcement learning-based adaptive systems for telecommunications under changing operating conditions. Designed end-to-end pipelines for Space Weather data acquisition, storage, and visualization to anticipate communication disruptions. Supervised 5 undergraduate engineering theses, guiding project execution and research quality.



**Northern Arizona University (Informatics, Computing and Cyber Systems), USA**

Aug 2018 - Dec 2018

AI Researcher

Researched AI image-analysis models to support wildfire prevention and faster disaster-response planning. Developed intelligent communication system proposals for emergency scenarios and remote environments with limited infrastructure. Delivered Applied Mathematics workshops for international students, strengthening technical foundations across multidisciplinary teams.

## Education



**PhD in Engineering**

2017 - 2021

UNT & NAU



Research in HF/NVIS communication systems and applied AI models.



**Master in Big Data & Data Science**

2021 - 2023

Universidad Autónoma de Madrid



Advanced training in data analytics, machine learning, and AI solution delivery.



**Electronic Engineer**

2011 - 2016

UNT



Specialization in telecommunications and signal processing systems.



**Electronic Technician**

2005 - 2010

Tucumán



Technical education in electronics and telecommunications fundamentals.



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