

Andres Felipe Florez Olivera, M.Sc.

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EXPERIENCE

Artificial Intelligence Engineer

March 2025 - Present

ITM - Distrito de Ciencia, Tecnologia e Innovacion

- Build the GenAI frameworks anchoring Medellin's digital transformation, embedding LLM-driven workflows into the city's public services.
- Develop Computer Vision pipelines that automate road infrastructure assessment for the Medellin Road Network Management System - replacing manual inspection with continuous, ML-driven monitoring.
- Engineer real-time monitoring stacks deployed across public infrastructure, processing telemetry at the scale of a 2.5M-citizen city.

Head of AI and Data Science Education

February 2024 - Present

Universidad Pedagogica y Tecnologica de Colombia (UPTC)

- Designed the technical backbone of UPTC's Specialization in AI - authored the modules on SOTA AI, Ethics, Mathematical Foundations, and ML Frameworks - and ran academic and administrative coordination across 3 postgraduate cohorts. Wrote the feasibility studies (PAE) that cleared the program for launch.
- Delivered 100+ hours of production-grade ML and Data Science training to industry professionals, with a curriculum aligned to current research and industry practice.
- Define the academic roadmap for UPTC's AI and Data Science programs and build partnerships with industry and research institutions that strengthen faculty expertise, program relevance, and graduate outcomes.

Artificial Intelligence Consultant

April 2026 - Present

Universidad Pedagogica y Tecnologica de Colombia (UPTC)

- Advise UPTC research groups on the design and deployment of applied AI solutions, translating frontier research into projects with measurable academic and regional impact.
- Provide technical consultancy on Generative AI, MLOps, and data architecture for institutional initiatives spanning teaching, research, and outreach.
- Guide the integration of AI tooling into UPTC's research pipelines and cooperation programs, strengthening the university's technical readiness for industry partnerships.

Senior AI/ML Engineer

April 2026 - Present

Google Developers Group

- Develop AI/ML applications on the Google AI ecosystem (Gemini, Vertex AI, Keras, JAX), shipping community-facing demos and reference architectures.
- Mentor GDG developers on agentic systems, RAG, and production Generative AI through code reviews, technical sessions, and open-source samples.
- Author code labs and technical content that lower the barrier to adopting frontier Google AI tooling across the Spanish-speaking developer community.

Artificial Intelligence Engineer

January 2025 - April 2026

Google for Developers

- Designed and shipped AI/ML solutions on the Google AI ecosystem (Gemini, Vertex AI, TensorFlow, Keras), turning cutting-edge research into production-ready demos and reference implementations.
- Led technical sessions, code labs, and community events on Generative AI, agentic systems, and MLOps best practices - training hundreds of developers across the Google for Developers network.
- Collaborated with Google's developer ecosystem to evaluate, integrate, and showcase emerging AI tooling - feeding technical feedback into adoption strategies for Spanish-speaking markets.

Machine Learning Engineer

September 2024 - December 2024

Gobernacion de Boyaca

- Built AI models and Big Data architectures supporting regional data-driven initiatives.
- Applied advanced analytics to complex public-sector datasets, turning raw data into actionable insights for regional policy.
- Provided technical consultancy to embed AI into governmental workflows, improving decision-making speed and accuracy.

Machine Learning Engineer

March 2023 - December 2024

TensorFlow User Group (TFUG)

- Built TensorFlow and Keras reference implementations that turned Google AI/ML research updates into runnable,

production-shaped code for the Colombian developer ecosystem.

- Designed and delivered hands-on code labs and engineering deep-dives on TensorFlow, Keras, and applied ML - for audiences ranging from students to industry experts. Authored material that localized ML engineering best practices for Spanish-speaking developers.
- Worked alongside local startups and academic institutions to integrate TensorFlow into their production ML stacks, closing the gap between research and shipped engineering.

Machine Learning Engineer

October 2023 - October 2024

Scale AI

- Engineered high-quality datasets for Reinforcement Learning from Human Feedback (RLHF) used to fine-tune frontier LLMs, improving alignment and reducing hallucination rates for enterprise clients.
- Architected automated benchmarking pipelines on LangGraph and LlamaIndex for multi-modal model evaluation, shortening the data validation cycle for Generative AI projects.
- Integrated LangSmith and Weights & Biases for systematic error analysis and observability, raising the production reliability of RAG-based systems and agentic workflows.

Data Scientist

March 2023 - September 2024

Servicio Geologico Colombiano

- Conducted rigorous evaluations of medical and industrial radiological practices, maintaining 100% data quality for regulatory compliance across Category 3 and 4 facilities.
- Drafted technical opinions for the Single Window for Foreign Trade (VUCE) within the Nuclear Affairs Directorate, applying Machine Learning models.
- Automated reporting in Power BI and built validation pipelines for radioactive facility inspections, improving the accuracy of safety-standard monitoring.

Data Scientist

August 2021 - February 2023

Stealth Startup

- Built end-to-end data pipelines and ML models to power core product features, turning raw data into actionable signals at early-stage velocity.
- Designed and ran exploratory analyses and A/B experiments that shaped product decisions and informed the company's data strategy from the ground up.
- Developed and deployed predictive models and dashboards that gave founders and stakeholders real-time visibility into key business metrics.

SKILLS

Python, PostgreSQL, PyTorch, Langfuse, Zep, Crawl4AI, Docling, Qdrant, LangGraph, DeepSeek, Qwen, Claude, Gemini, AWS, Google Cloud, Hugging Face, MCP, Docker, Terraform

EDUCATION

Master of Science in Artificial Intelligence

2024 - 2025

Universidad de los Andes

Professional Certificate in Cloud Computing

2025

The University of Texas at Austin

Professional Certificate in Data Science and Machine Learning

2024

Massachusetts Institute of Technology (MIT)

Bachelor of Science in Physics

2015 - 2021

Universidad Pedagógica y Tecnológica de Colombia

PROJECTS

Corn Disease Detection via Optimized AI for Edge Device Deployment

Macea Zabaleta, L. E.; Florez Olivera, A. F.; Castillo Ojeda, N.; Gonzalez Zarate, O. J.

Master of Science in Artificial Intelligence - Universidad de los Andes, Colombia | Center for Embedded Devices and Research in Digital Agriculture (CEDRA), Sao Leopoldo - RS, Brazil

Proyecto Paramo

