

ADRIÁN HERNÁNDEZ PADRÓN

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Summary

As an MLOps-driven Data Scientist/AI Engineer, I lead the development and deployment of AI solutions. My core expertise is designing end-to-end AI systems, now with a deep focus on developing scalable GenAI applications (LLMs, RAG, Agents) from concept to production. I turn models of all types—classical, deep learning, or generative—into robust, monitored production systems, implementing MLOps practices on cloud platforms to deliver reliable, high-impact results built to scale.

Experience

Data Scientist

Sept 2023 – present

DISA HOLDING ENERGÉTICO

- Drove significant logistics optimization by enhancing core route solvers (CVRPTW) with cluster-constrained models, directly improving fleet efficiency and reducing operational costs.
- Led a collaborative project with the University of La Laguna on anomaly detection in authentication logs, utilizing embeddings, sequences, and autoencoders.
- Built and automated a scalable ML production pipeline, implementing containerized CI/CD workflows (Docker, Kubernetes, ArgoCD) to enable robust, reproducible, and fast model training and inference.
- Established robust end-to-end ML governance by deploying MLflow in Databricks, enabling full-lifecycle model tracking, model registry, and data lineage.

Research Data Scientist

Jan 2023 – Aug 2023

LORO PARQUE FUNDACIÓN

- Engineered a high-throughput data pipeline to process massive-scale marine bioacoustic data, enabling the calculation of key acoustic indexes to quantify anthropogenic noise impact.
- Developed an AI-driven sound classification model and co-engineered a Sound Event Detection (SED) system to advance automated ecological monitoring.

Coordinator - Research Department

July 2022 – Jan 2023

TURISMO DE TENERIFE

- Ensured data integrity within the Data Warehouse while conducting statistical analysis, visualizing actionable insights via Power BI dashboards.

Education

UNIVERSIDAD INTERNACIONAL DE VALENCIA (VIU)

Valencia, España

Master's Degree in Astronomy and Astrophysics

Apr 2024 – June 2025

UNIVERSIDAD INTERNACIONAL DE VALENCIA (VIU)

Valencia, España

Master's Degree in Data Science and Big Data

Apr 2022 – June 2023

UNIVERSIDAD DE LA LAGUNA (ULL)

Tenerife, España

Bachelor's Degree in Physics

Sept 2016 – Sept 2021

Skills

AI Engineering & GenAI: Building end-to-end AI solutions and LLM applications using LangChain (RAG, Agents, OpenAI)

MLOps & Production: Deploying & managing production ML pipelines using MLflow, Docker, Kubernetes (ArgoCD), and orchestration tools (Airflow, Databricks); serving models with FastAPI

Data Science: Developing classical ML models (forecasting, prediction, clustering) using libraries like Scikit-learn, XGBoost, and PyTorch for deep learning

Projects

Mnemosyne (ReAct GenAI Agent)

- Engineered an autonomous ReAct Agent (Claude Sonnet 4.5) that iteratively plans, executes, and refines search strategies to detect duplicate vulnerability reports with explainable reasoning.
- Implemented a Hybrid Search architecture (Qdrant) fusing semantic (BGE) and keyword (BM25) retrieval via Reciprocal Rank Fusion (RRF), optimized with Cross-Encoder re-ranking (FlashRank) for high precision.

End-to-End MLOps Pipeline (Churn Prediction)

- Engineered a production-ready MLOps pipeline orchestrated with Apache Airflow to automate the lifecycle of a customer churn prediction model.
- Integrated data ingestion, validation, and model training steps, fully containerized using Docker to ensure environment reproducibility and scalability.

Languages

Spanish: Native

English: Professional Working Proficiency (B2)

Certifications

- 2025 Deep Agents with LangGraph, LangChain Academy.
- 2024 Docker, Podman & Kubernetes, CampusMVP
- 2023 TensorFlow Advanced Techniques, DeepLearning.ai
- 2023 Machine Learning Engineering for Production (MLOps), DeepLearning.ai