# ALEJANDRO ORTIZ PERDOMO

## AI Engineer | Machine Learning Engineer

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## PROFESSIONAL PROFILE

AI Engineer specialized in **GenAI/RAG** and **LLMs** with proven track record productionizing solutions on **Azure**. End-to-end experience from research to production deployment with **MLOps**. Developer of intelligent agents with **LangChain** for enterprise workflow automation. Combines strong mathematical foundation (Statistics) with modern software engineering (CI/CD, Docker) to build scalable and reliable AI systems.

## WORK EXPERIENCE

### AI Developer Consultant
**Jun 2025 - Present**

**Freelance Project / Consultancy**

- **CV-Job Matching System:** Built complete pipeline with **Azure Document Intelligence** + **AI Search** processing 500+ CVs/day with 95% extraction accuracy. Semantic search with embeddings reduced screening time by **70%**.
- **Intelligent Automation:** Implemented vectorization and optimized semantic chunking for candidate-job matching, improving recommendation quality by **40%** vs. traditional keyword search.
- **Impact:** System handling **10k+ searches/month** with <200ms latency. Stack: Python, Azure AI Search, Document Intelligence, FastAPI.

### Machine Learning Engineer
*Sep 2023 – Jun 2025*

**Global Hitss**

- **GenAI & RAG:** Designed and deployed conversational agent with RAG that reduced support tickets by **40%**, processing **10k+ queries/month** with 85% resolution without escalation. Stack: LangChain, Azure OpenAI, FAISS.
- **MLOps:** Implemented CI/CD pipeline in **Databricks + MLflow** reducing deployment time from 2 weeks to **2 days**. Production models with automatic drift monitoring and retraining.

## EDUCATION

**Master in Software Engineering**
Universidad de los Andes
2025 - In Progress

**B.S. in Statistics**
Universidad del Valle
2011 - 2016

**Data Science Diploma (DS4A)**
Correlation One, 2022

**Deep Learning Diploma**
Univ. Autónoma Occidente, 2023

## TECH STACK

**GENAI & LLMS**

**LangChain** ⭐⭐⭐⭐⭐ (Agents, RAG)
**Azure OpenAI** ⭐⭐⭐⭐⭐ (GPT-4, Embeddings)
**Prompt Engineering** ⭐⭐⭐⭐⭐
**Vector DBs** ⭐⭐⭐⭐ (FAISS, Pinecone)

**AZURE AI & CLOUD**

**Azure AI Search** ⭐⭐⭐⭐⭐
**Document Intelligence** ⭐⭐⭐⭐
**Databricks + MLflow** ⭐⭐⭐⭐⭐

**ML/DL FRAMEWORKS**

**PyTorch** ⭐⭐⭐⭐ | TensorFlow ⭐⭐⭐
**Scikit-learn, XGBoost, LightGBM** ⭐⭐⭐⭐⭐
**Hugging Face Transformers** ⭐⭐⭐⭐

- **Reinforcement Learning:** Productized *Next Best Offer* (NBO) system with A/B testing that increased conversion by **28%** and revenue by **$1.2M/year**.
- **Churn Model:** Developed predictive model with **Lift of 5.0** and 82% recall in top decile, integrated to CRM for proactive retention. Impacted **50k+ customers**.

### Machine Learning Consultant *Aug 2023 – Sep 2023*
**Grupo CINTE**

- **Observability:** Designed a methodology for *data/model drift* detection with automated alerts for retraining.
- **Efficiency:** Optimized LightGBM and Random Forest algorithms for better computational performance.

### Data Scientist *Mar 2023 – Jul 2023*
**NAE**

- **Contactability Model:** Developed **LightGBM** model that increased effective contact rate by **60%** (from 25% to 40%), optimizing time windows and channels. Impacted campaigns with **100k+ contacts/month**.

## OPEN SOURCE PROJECTS

### 🤖 Email Agent with LangChain  github.com/alejortizp/email-agent
Intelligent agent that queries emails via IMAP, classifies with LLM, and generates contextual automatic responses. Reduces response time by **80%**.
**Stack:** LangChain, Azure OpenAI, IMAP, Python, Prompt Engineering

### 💬 NL-to-SQL/Pandas Agent  github.com/alejortizp/nl-to-code
Agent that translates natural language to SQL queries and Pandas operations. Includes code validation, secure sandbox execution, and automatic results visualization.
**Stack:** LangChain, SQL, Pandas, Code Interpreter, ReAct Pattern

### 🛒 RAG Restaurant Ordering System  github.com/alejortizp/rag-ordering
Conversational ordering system with RAG over restaurant menu. Agent processes product selection in natural language, generates invoices, and calculates totals. Includes inventory management.
**Stack:** LangChain, FAISS, Azure OpenAI, FastAPI, Streamlit