

# ALEJANDRO ORTIZ PERDOMO

AI Engineer | Machine Learning Engineer

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[🌐 alejortizp.github.io/curriculum\\_HV](https://alejortizp.github.io/curriculum_HV)

## PROFESSIONAL PROFILE

Machine Learning Engineer with end-to-end experience from experimentation to production. Specialized in predictive models (**churn, propensity, NBO**) with quantifiable impact: **Lift 3.0, +15% conversion, +60% contactability**. Proficient in **Scikit-learn, LightGBM, PyTorch** and **Databricks + MLflow** for MLOps. Combines strong mathematical foundation (Statistics) with modern software engineering to build reliable and scalable ML pipelines.

## WORK EXPERIENCE

### AI Developer Consultant

Jun 2025 – Present

Periferia IT

- **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.

## 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

## LANGUAGES

### Spanish

Native

### English

Professional Proficiency  
(B2/C1)

## POWER SKILLS

Effective Communication

Problem Solving

Analytical Thinking

Team Collaboration

Adaptability

Continuous Learning

Time Management

Technical Leadership

# Machine Learning Engineer

Global Hitss

Sep 2023 – Jun 2025

- **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.
- **Reinforcement Learning:** Productized *Next Best Offer* (NBO) system with A/B testing that increased conversion by **15%** and revenue by **\$10k per person**.
- **Churn Model:** Developed predictive model with **Lift of 3.0** and 82% recall in top decile, integrated to CRM for proactive retention. Impacted **50k+ customers**.

## Machine Learning Consultant

Grupo CINTE

Aug – Sep 2023 (Short-term project)

- **ML Observability:** Designed comprehensive monitoring methodology for *data/model drift* detection with automated retraining alerts, adopted as the data science team's standard.
- **Optimization:** Audited and optimized LightGBM and Random Forest algorithms, improving computational efficiency and reducing inference times.

## Data Scientist

NAE

Mar 2023 – Jul 2023

- **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**.

## Data Scientist II

Xolit

May 2022 – Jan 2023

- **Payment Propensity Model:** Developed predictive model for payment probability and portfolio agreement, maximizing collection through **automated management priorities** based on propensity scores.
- **Recommendation System:** Implemented optimal contact time-slot recommendation engine per account holder, increasing debt collection management effectiveness.
- **Customer Segmentation:** Designed clustering-based marketing strategy for account holders, enabling personalized communication per segment to optimize collection rates.
- **Monitoring:** Built **Power BI** dashboards for tracking collection KPIs and production model performance metrics.

# CERTIFICATIONS

**AI-102: Microsoft Certified Azure AI Engineer Associate**

Udemy, Feb 2026

**NLP Specialization (RAG/Transformers)**

Coursera, Jun 2025

**PyTorch Ultimate**

Coursera, Mar 2025

**MLOps and Databricks**

Netec, Dec 2024

**AWS Cloud Practitioner**

Udemy, Feb 2022

## TECH STACK (years exp.)

### GENAI & LLMS

**LangChain 2+** (Agents, RAG)

**Azure OpenAI 2+** (GPT-4, Embeddings)

**Prompt Engineering 2+**

**Vector DBs 2+** (FAISS, Pinecone)

### AZURE AI & CLOUD

**Azure AI Search 1+**

**Document Intelligence 1+**

**Databricks + MLflow 3+**

### ML/DL FRAMEWORKS

**PyTorch 2+ | TensorFlow 3+**

**Scikit-learn, XGBoost, LightGBM 4+**

**Hugging Face Transformers 2+**

### MLOPS & ENGINEERING

**Python, SQL, PySpark 7+**

**Docker, CI/CD 2+**

**FastAPI, Streamlit 3+**

**Git, GitHub Actions 4+**

# OPEN SOURCE PROJECTS

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## **Email Agent with LangChain**

— [github.com/alejortizp/email-agent](https://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](https://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](https://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