

ROBERTO VILLAFUERTE

AI/ML Engineer

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PROFESSIONAL PROFILE

Computer Science final-year undergraduate specializing in MLOps and RAG systems. Experience architecting automated forecasting pipelines (Snowflake/Mage AI) and deploying multi-tenant GenAI support agents. Completed Master's-level coursework in Trustworthy ML at the University of Helsinki. Focused on shipping scalable, bias-aware production models.

EXPERIENCE

COMPUMAX

AI Engineer

Remote, Ecuador

Dec 2025 – Present

- Architecting a multi-tenant RAG helpdesk for small businesses; reduced support ticket resolution time by roughly **30%** (projected) by automating responses using proprietary vendor data.
- Designing internal Generative AI workflows to modernize operations, ensuring alignment between technical architecture and unit economics.

Datalysis Group

Machine Learning Engineer Intern

Remote, Ecuador

Feb 2025 – Jun 2025

- Built an automated demand forecasting pipeline for inventory replenishment using **Snowflake** and **Mage AI**, ingesting daily transaction data to support restocking decisions for operations and finance.
- Implemented an end-to-end ML workflow, automating data cleaning/validation, feature engineering, training, and evaluation for reliable production runs.

TECHNICAL PROJECTS

Fairness-Aware Candidate Pre-Screening | Python, Docker, CI/CD, Scikit-learn

Jan 2026

- Developed a production-grade ML pipeline for automated hiring that includes bias mitigation via Equal Opportunity post-processing.
- Integrated **Fairness Metrics** (SPD, DI, TPR Gap) directly into the evaluation loop to prevent algorithmic discrimination.
- Engineered a robust deployment environment using **Docker** and established CI/CD workflows for consistent testing.

Seismic Multi-Label Event Classifier | Python, Signal Processing, Data Science

- Architected an end-to-end data science pipeline to classify complex seismic signals (.at2 format) using multi-label classification techniques.
- Optimized feature extraction from raw acoustic data to improve event detection accuracy in noisy environments.

EDUCATION

University of Helsinki

Exchange Studies, Master's Level Data Science (GPA: 4.83/5.0)

Helsinki, Finland

Aug 2025 – Jan 2026

- Specialization:** Engineering of Machine Learning Systems, Trustworthy ML, Big Data Platforms.
- Completed 30 ECTS of rigorous coursework focusing on the architecture and reliability of AI systems.

Universidad San Francisco de Quito (USFQ)

Bachelor of Engineering, Computer Science

Quito, Ecuador

Expected Dec 2026

TECHNICAL SKILLS

Languages: Python, SQL, Bash

AI & ML: Generative AI, LLMs, RAG, LLM Evaluation, Forecasting, ML Systems

Infrastructure: Snowflake, Mage AI, Docker, CI/CD (GitHub Actions), Git

Concepts: MLOps, Data Pipelines, Reproducibility, Validation, CRISP-DM

AWARDS & CERTIFICATIONS

2nd Place, IEEEExtreme 18.0 (Ecuador): Global 24-hour algorithmic programming competition.

Technical AI Safety Course (BlueDot Impact): AI alignment curriculum.

IBM Machine Learning Specialization: Professional Certificate (Coursera).