

# 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

<b>COMPUMAX</b> <i>AI Engineer</i>	Remote, Ecuador Dec 2025 – Present
<ul style="list-style-type: none"><li>Architecting a multi-tenant RAG helpdesk for small businesses; reduced support ticket resolution time by roughly <b>30%</b> (projected) by automating responses using proprietary vendor data.</li><li>Designing internal Generative AI workflows to modernize operations, ensuring alignment between technical architecture and unit economics.</li></ul>	
<b>Datalysis Group</b> <i>Machine Learning Engineer Intern</i>	Remote, Ecuador Feb 2025 – Jun 2025
<ul style="list-style-type: none"><li>Built an automated demand forecasting pipeline for inventory replenishment using <b>Snowflake</b> and <b>Mage AI</b>, ingesting daily transaction data to support restocking decisions for operations and finance.</li><li>Implemented an end-to-end ML workflow, automating data cleaning/validation, feature engineering, training, and evaluation for reliable production runs.</li></ul>	

## TECHNICAL PROJECTS

<b>Fairness-Aware Candidate Pre-Screening</b>   <i>Python, Docker, CI/CD, Scikit-learn</i>	Jan 2026
<ul style="list-style-type: none"><li>Developed a production-grade ML pipeline for automated hiring that includes bias mitigation via Equal Opportunity post-processing.</li><li>Integrated <b>Fairness Metrics</b> (SPD, DI, TPR Gap) directly into the evaluation loop to prevent algorithmic discrimination.</li><li>Engineered a robust deployment environment using <b>Docker</b> and established CI/CD workflows for consistent testing.</li></ul>	
<b>Seismic Multi-Label Event Classifier</b>   <i>Python, Signal Processing, Data Science</i>	
<ul style="list-style-type: none"><li>Architected an end-to-end data science pipeline to classify complex seismic signals (.at2 format) using multi-label classification techniques.</li><li>Optimized feature extraction from raw acoustic data to improve event detection accuracy in noisy environments.</li></ul>	

## EDUCATION

<b>University of Helsinki</b> <i>Exchange Studies, Master's Level Data Science (GPA: 4.83/5.0)</i>	Helsinki, Finland Aug 2025 – Jan 2026
<ul style="list-style-type: none"><li><b>Specialization:</b> Engineering of Machine Learning Systems, Trustworthy ML, Big Data Platforms.</li><li>Completed 30 ECTS of rigorous coursework focusing on the architecture and reliability of AI systems.</li></ul>	
<b>Universidad San Francisco de Quito (USFQ)</b> <i>Bachelor of Engineering, Computer Science</i>	Quito, Ecuador Expected Dec 2026

## TECHNICAL SKILLS

<b>Languages:</b> Python, SQL, Bash
<b>AI &amp; ML:</b> Generative AI, LLMs, RAG, LLM Evaluation, Forecasting, ML Systems
<b>Infrastructure:</b> Snowflake, Mage AI, Docker, CI/CD (GitHub Actions), Git
<b>Concepts:</b> MLOps, Data Pipelines, Reproducibility, Validation, CRISP-DM

## AWARDS & CERTIFICATIONS

<b>2nd Place, IEEEExtreme 18.0 (Ecuador):</b> Global 24-hour algorithmic programming competition.
<b>Technical AI Safety Course (BlueDot Impact):</b> AI alignment curriculum.
<b>IBM Machine Learning Specialization:</b> Professional Certificate (Coursera).