

# Braulio Otavalo

## Machine Learning Engineer

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## SUMMARY

I'm an AI/ML Engineer with 6+ years of expertise in machine learning, deep learning, leveraging Python, TensorFlow, and PyTorch to build scalable, secure, and resilient cloud-native solutions.

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## PROFESSIONAL EXPERIENCE

### ML Engineer

BairesDev, USA, Remote

Jun 2025 - present

- Reproduce cutting-edge ML research across domains like NLP, CV, RL, and multimodal AI; validate results from top-tier conferences (NeurIPS, ICML, ACL, CVPR, ICLR) and benchmark novel architectures under diverse conditions.
- Investigate state-of-the-art language models, prompt engineering methods, and emerging techniques such as RLHF, Constitutional AI, and multi-agent systems to assess performance and reasoning capabilities.
- Build robust instrumentation and logging systems for complex ML and multi-agent workflows; collect and structure detailed execution data for in-depth analysis; evaluate model performance, efficiency, and cost trade-offs on leading benchmarks such as GAIA, SWE-bench, MLBench, HLE, MMLU, and ARC-AGI-2.

### ML Engineer

Awana, USA, Remote

Aug 2024 - Jul 2025

- Led the development of AI strategies for Awana's recruiting process, automating applicant-job description matching and improving success rates by 20%.
- Designed and executed the AI Skills Accelerator, a 12-week up-skilling program for junior developers, enabling them to deliver clean ML projects 30% faster.
- Designed and implemented Generative AI-based solutions for ChildNEXUS, including semantic recommenders and chatbots, leveraging vector embeddings, vector DB, graph DB, LLMs, and RAG pipelines, which improved user engagement by 15% through automated, real-time responses.
- Built and maintained scalable, cost-efficient ML workflows on GCP, AWS, and Azure, reducing operational costs by 25% through automated MLOps pipelines using Docker, Kubernetes, Terraform, and GitHub Actions.

### Data Scientist Consultant - STC

World Bank Group, USA, Remote

Feb 2024 - Jun 2024

- Developed a web application for infrastructure project prioritization based on the World Bank's Infrastructure Prioritization Framework, automating data analysis, geospatial processing, and nonlinear optimization.
- Conducted buffer and zonal statistic analysis on geospatial data, replicating complex calculations to ensure accurate project prioritization.
- Solved a Principal Component Analysis (PCA) problem modeled as a nonlinear optimization problem with equality and inequality constraints, optimizing project prioritization scenarios.
- Created interactive data visualization dashboards using Plotly, Leaflet, Leafmap, and Chart.js, providing stakeholders real-time insights into project prioritization outcomes.

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## EDUCATION

**UNIVERSITY OF SOUTHAMPTON, UNITED KINGDOM**  
MSc in Artificial Intelligence, Merit (Upper-second class honour)

Nov 2020

**NATIONAL POLYTECHNIC SCHOOL, ECUADOR**  
BSc in Electronic and Control Engineering, Cum Laude (9/10)

Jun 2014

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## HONORS AND AWARDS

**SANTANDER SCHOLARSHIP - MIT PROFESSIONAL EDUCATION**  
Leading digital transformation program.

2020

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## CERTIFICATES & COURSES

AI-Assisted Development - KodeKloud

2025

AWS Certified Cloud Practitioner - AWS Training and Certification

2025

AI For Business Specialization, University of Pennsylvania - Coursera

2025

MLOps Zoomcamp, DataTalksClub

2024

Climate Change AI Summer School 2024, Climate Change AI

2024

Oxford Machine Learning Summer School - OxML 2023 , AI for Global Goals

2023

Leading Digital Transformation, MIT Professional Education

2020

Big Data For Business, Fundación Telefónica Movistar

2019

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## SKILLS

**Programming:** Python, R, Stata, HTML+CSS, Javascript, TensorFlow, PyTorch

**AI Dev:** Cursor, Claude Code, Gemini CLI

**MLOps:** AWS, Azure, GCP, Docker, Kubernetes, BentoML, MLFlow, Comet ML, Kubeflow, Terraform, GitHub Actions

**Data Engineering:** SQL, Pandas, AirFlow, DVC, PySpark, Great Expectations

**Computer Vision:** OpenCV, PIL, Torchvision, Albumentations, YOLO

**LLM Stack:** Ollama, LM Studio, Elasticsearch, LlamaIndex, LangChain, Haystack, Qdrant, Pinecone, Ragas

**Agentic AI:** AutoGen, crewAI, LangGraph, MemGPT, LangMem, Google ADK

**SOFT SKILLS:** Leadership, problem-solving, communication, teamwork, cooperation, organization, creativity.

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## LANGUAGES

- Spanish (native)
- English (fluent)