

LUIZ FERNANDO COSTA DOS SANTOS

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MLOps & Machine Learning Engineer

Summary

Results-driven Machine Learning Engineer with 3+ years in scalable data pipelines and ML systems. Expertise in Spark, Scala, and Python for optimizing model performance and reducing costs. Passionate about robust data solutions and mentoring.

Technical Skills

Languages: Scala, Python, SQL, Clojure, R, Java, C/C++
Big Data & Cloud: Spark, Databricks, AWS (S3, EMR, Glue, EC2), Data Mesh, Data Warehousing, Datomic, PostgreSQL, InfluxDB
MLOps & Orchestration: Kubernetes, Docker, Airflow, Terraform, CI/CD, Grafana, Model Deployment
ML Frameworks & Libraries: PyTorch, TensorFlow, Scikit-learn, Pandas, NumPy, XGBoost

Experience

Nubank

Machine Learning Engineer

Sep 2022 – Present

São Paulo, Brazil (Hybrid)

- Architected Spark Scala pipelines, reducing processing time by **10%** and increasing AUC by **4pp**.
- Migrated ETL to Data Mesh, cutting infrastructure costs by **25%** and improving governance across **10+ teams**.
- Led Python model orchestration (batch/real-time), ensuring seamless integration.
- Collaborated with Product/Data Science to translate business goals into technical requirements.
- Ensured compliance (data lineage, auditability) with internal/external regulations.

Huawei & Embrapii

Machine Learning Engineer

Feb 2022 – Sep 2022

João Pessoa, Brazil

- Built ETL pipeline (Docker, Airflow, InfluxDB) for Random Forest forecasts, improving energy generation by **up to 12%**.
- Developed a solar characterization dataset for optimal solar tracker angles.
- Implemented automated monitoring for time-series forecasts, enhancing pipeline reliability.

Projects

PUMLE | Spark, Data Engineering

2025

- Developed a Spark pipeline for processing and modeling geological data for carbon storage.

Car Plate Detection | Python, YOLO

2024

- Built a YOLO model for Brazilian car plate recognition, achieving **95% accuracy**.

Education

Universidade Federal da Paraíba (UFPB)

B.S. in Data Science and Artificial Intelligence (GPA: 9.43 / 10.0)

Jun 2025

João Pessoa, Brazil

Certifications

Machine Learning in Production – DeepLearning.AI

2025

Neural Networks and Deep Learning – DeepLearning.AI

2021

CS50 – Harvard

2025

Leadership & Mentoring

Momento

Mentor & Tech Lead

Jul 2025 – Present

Remote

- Mentor and guide team leads for technology and communications. Joins Brazilian students with professionals.

TriLha

Advisor & Mentor

Jun 2024 – Present

Remote

- Introduced +50 students to computer science through lectures and projects.