

LEONARDO SANTIAGO BENITEZ

Machine Learning Engineer

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EDUCATION

Master's in Artificial Intelligence for Image Processing and Computer Vision

Erasmus Mundus Joint Master with **Université de Bordeaux, Universidad Autónoma de Madrid, Pázmány Péter Catholic University**

📅 Graduating in January 2026 📍 France, Spain, Hungary

Bachelor's in Electronic Engineering

Federal Institute of Santa Catarina

📅 Completed in 2022 📍 Brazil

Electronic Technician

Federal Institute of Santa Catarina

📅 Completed in 2014 📍 Brazil

PROFESSIONAL EXPERIENCE

Machine Learning Researcher

Video Processing and Understanding Lab, UAM

📅 06/2025 - Present 📍 Spain

- Design and develop novel machine unlearning algorithms for generative models, with a strong focus on efficiency and scalability.
- Build and maintain Vision-Unlearning, an open-source library supporting state-of-the-art unlearning methods, standardized metrics, and reproducible prompt pipelines.
- Conduct methodical studies on Stable Diffusion, including ablations on sparsity, overwrite strategies, and LoRA configurations.

Machine Learning Researcher

Research Center for Natural Sciences

📅 10/2024 - 01/2025 📍 Hungary

- Tackle neuroscience challenges using Machine Learning techniques, paving the way for new biomedical methods.
- Architect and train a deep Conditional Generative Adversarial Network (cGAN) to decode brain activity with minimal preprocessing.
- Develop a fully data-driven method for generating functional maps in sensory regions from high-resolution functional ultrasound imaging (fUSI).

Data Engineer

Skaylink (now part of Vodafone)

📅 06/2021 - 09/2024 📍 Germany (remote)

PROFILE

"With over 7 years of experience in data science and software development, I have worked on projects across various industries (such as agriculture and digital marketing) and for companies of distinct sizes (including agile startups, research labs, and renowned enterprises like BMW and HDI)"

SKILLS

English ●●●●●●●●
Spanish ●●●●●●●●
Portuguese ●●●●●●●●
German ●●●●●●●●

Python ●●●●●●●●
SQL ●●●●●●●●
Spark ●●●●●●●●
Azure Synapse ●●●●●●●●
Databricks ●●●●●●●●
Snowflake Cloud ●●●●●●●●
Elastic Search ●●●●●●●●
Azure Functions ●●●●●●●●
AWS Lambda ●●●●●●●●
Kubernetes ●●●●●●●●
Azure Devops Pipelines ●●●●●●●●
AWS Code Build ●●●●●●●●
Git ●●●●●●●●
Linux ●●●●●●●●

OTHER ACTIVITIES

📖 **Teaching private AI classes**
Online classes including ML and related topics. Also, I published a free ML course on YouTube (5 hrs duration)

Pandas Transformers OpenCV

🏆 **IFSC Innovation Challenge 2018**
I was the Project Manager of the startup Lóris Industrial Intelligence.

Entrepreneurship Keras IoT

👤 **Volunteer Portuguese teacher for Arab immigrants**
NGO Hospitality Circles - From 08/2017 to 04/2018.

Communication Empathy

- Train and deploy machine learning models for text classification, similarity analysis, and topic modeling, used in a variety of applied projects.
- Develop chatbots and conversational agents using large foundational models.
- Design and develop data lakes, data warehouses and data pipelines for a myriad of large customers.
- Use modern software development tools and methodologies, including containerization, automated testing, infrastructure-as-code and cloud-native practices.
- Develop automations using Microsoft Graph API, AWS CLI and similar technologies, improving the quality and efficiency of our IT services.

Software Developer

Zedia

📅 06/2020 - 06/2021

📍 Brazil

- Develop data-driven solutions to challenges like campaign planning and privacy-preserving ad targeting, using the languages Python, Go, and Lua.
- Work with large-scale databases (receiving tens of millions of requests per day) and the applications that produce/consume that data, maintaining the reliability and availability of our services even in high throughput moments.
- Software modeling in a complex domain (IAB compliant digital advertising platform), enabling advanced advertisements to the main television groups of Brazil.

Software Developer

Research Lab in Smart Grids, IFSC

📅 02/2018 - 06/2020

📍 Brazil, Finland

- Implemented machine learning models to predict energy consumption and analyze energy efficiency of public buildings, successfully saving about 10% in the energy usage of several universities.
- Hardware-firmware integration in microcontroller systems (STM32, Raspberry Pi, Intel Galileo and Arduino Mega).
- Performed a research interchange of 3 months with Häme University of Applied Sciences (Finland), developing a Convolutional Neural Network to recognize the behavior of cows for the purpose of improving milk quality, within a cloud-native web system.

Web Developer

Research lab in Educational Technologies, IFSC

📅 03/2017 - 12/2017

📍 Brazil

- Developed an online educational platform with JQuery (Javascript) and Bootstrap (HTML and CSS).
- Designed the website user experience and visual structure.

Infantry Soldier

Brazilian Air Force

📅 03/2015 - 02/2016

📍 Brazil

- Graduated as the number one (best) in the Soldiers' Training Course.
- Commanded for 8 months the infantry troop of the Aeronautic's Police.

CERTIFICATIONS

- Azure DevOps Engineer Expert (AZ-400)
- SnowPro Core
- Databricks Machine Learning Professional
- Azure AI Engineer Associate (AI-102)
- Azure Data Scientist Associate (DP-100)
- Microsoft Fabric Analytics Engineer Associate (DP-600)
- Azure Developer Associate (AZ-204)
- Azure Databricks Platform Architect
- Nvidia AI Infrastructure and Operations Associate
- Azure Cosmos DB Developer Specialty (DP-420)
- Azure Data Fundamentals (DP-900)
- Azure AI Fundamentals (AI-900)
- Microsoft Security, Compliance, and Identity Fundamentals (SC-900)

PUBLICATIONS

Peer-reviewed academic venues:

- Deep learning image recognition of cow behavior and an open data set acquired near an automatic milking robot (Agricultural and Food Science Journal)
- Unsupervised machine learning in industrial applications: a case study in iron mining (IBSSC IEEE Conference)
- Modeling of Energy Management Systems using Artificial Intelligence (SysCon IEEE Conference)
- Integrando gerenciamento energético e bem-estar animal utilizando aprendizado de máquina e visão computacional (CONF-IRM Conference)
- Energy management web portal prototype (PGEN) for public institutions (Chilecon IEEE Conference)
- Development of a phasor measurement unit prototype applied to Brazilian and Chilean electrical systems (Chilecon IEEE Conference)
- Plus 2 others...

Talks, presentations and blog posts:

- Machine Unlearning in Practice (ML Weed Europe conference)
- Comparison of Information Retrieval Techniques Applied to IT Support Tickets (Arxiv)
- PAT++: a cautionary tale about generative visual augmentation for Object Re-identification (Arxiv)
- Function map identification in large brains with a deep-learning-based approach (conference Tudományos Diákkör)
- Don't solve twice the same problem (Skaylink blog)
- Kubernetes ist nicht gleich Multi-Cloud (Magazine IX Extra Cloud-Architektur)
- Streamline IoT projects with Infrastructure as Code (Medium)
- Plus 11 others...