

Müsel Emmanuel Tabares Pardo

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🌐 <https://musel.dev>

📍 France

MEXICAN | DOB: 05/08/2002

About

Profile 📖 Looking for a Master's students Internship at Mistral. The more complex and difficult a problem is, the more I'm willing to take it on. I dream of becoming the best.

Experience

- 10/2023 – 01/2024 📖 **Machine Learning Engineer** Moodme | United States
Designed and deployed real-time facial emotion recognition systems using deep learning-based computer vision techniques. Implemented a Graph Auto-Encoder (GAE) to learn latent representations of facial landmarks for a Unity 3D Face SDK, enabling identity-preserving expression synthesis and emotion classification.
- 04/2023 – 08/2023 📖 **Data Analyst** CEMEX | Monterrey, Mexico
Conducted advanced data analysis using SQL; built interactive Power BI dashboards to support Product Management decisions. Developed predictive and statistical forecasting models to assess user behavior trends and adoption metrics for CEMEXGO.

Education

- 05/2025 – Current 📖 **Erasmus Mundus Master in Advanced Machine Learning and Optimisation Systems (EMSSE)**
Université de technologie de Compiègne | Compiègne, France
- 03/2025 – 06/2025 📖 **Erasmus Mundus Master in Advanced Machine Learning and Optimisation Systems (EMSSE)**
Universiteti Politeknik i Tiranës | Tirana, Albania
- 09/2024 – 01/2025 📖 **Erasmus Mundus Master in Advanced Machine Learning and Optimisation Systems (EMSSE)**
Universitat Politècnica de Catalunya | Barcelona, Spain
- 08/2023 – 12/2024 📖 **Specialization in Advanced Artificial Intelligence Applied to Data Science**
Monterrey Institute of Technology and Higher Education | Guadalajara, Mexico
- 08/2021 – 06/2024 📖 **B.S. in Computer Science and Technology**
Monterrey Institute of Technology and Higher Education | Monterrey, Mexico

Projects

- Medical LV Segmentation 📖 U-Net for left-ventricle segmentation on Stanford EchoNet-Dynamic; compared pixel-wise masks vs. landmark detection; used Dice score and morphology post-processing. TECH: PyTorch, OpenCV, Albumentations LINK: <https://github.com/Tec-AI-23/EchoNetDynamic>
- Human Activity Recognition 📖 Evaluated 18 ML algorithms with grid search on accelerometer data to classify activity levels in older adults; validated via CV and significance tests. LINK: <https://github.com/Tec-AI-23/HAR70>

Projects (continued)

Hydrological Forecasting	Deep CNN pipeline predicting river stage from imagery; EfficientNet transfer learning and multi-modal inputs (visual + hydrological) for accuracy gains. https://github.com/musel25/research_deep_learning
LLM + RAG for Metaheuristics	Automated framework using RAG + LLMs to generate and refine metaheuristics for black-box optimisation; integrated Qwen2.5-coder, ChromaDB, and Optuna. https://github.com/musel25/llm-metaheuristics
Obesity Level Estimation	End-to-end classification on UCI obesity dataset; DR (PCA, t-SNE), mutual information, 31 models; best: XGBoost (96%). https://github.com/musel25/obesity_ml
Leukocyte CNN + LIME	CNN to classify leukocytes (cancerous vs non-cancerous) with LIME explanations to highlight decision-driving regions.
Fine-tuned GPT-2 Chatbot	Fine-tuned GPT-2 on WhatsApp chats; regex parsing to HF Datasets; trained and deployed interactive chatbot pipeline. https://github.com/musel25/her_if_it_was_2025
NLP Web App	Real-time text emotion classifier with logging and analytics; built using Streamlit and standard NLP preprocessing. https://github.com/musel25/nlp_project

Skills

Core Focus	Machine Learning, Deep Learning, Computer Vision, Natural Language Processing, Optimisation
Programming	Python, SQL, Bash; LaTeX
ML/DL	PyTorch, TensorFlow/Keras, scikit-learn, Optuna, XGBoost, Lightning, Albumentations
CV	OpenCV, segmentation & detection, landmarks, GAE/autoencoders, EfficientNet, U-Net
NLP	Hugging Face Transformers, tokenisation, fine-tuning, RAG, text classification
Data	Power BI, pandas, NumPy; data pipelines, EDA, statistical modelling
Platforms	Unity (Face SDK integration), Git/GitHub, Linux, Docker

Languages

Mother Tongue	Spanish
English	Listening C2 Reading C2 Writing C1 Spoken Production C1 Spoken Interaction C1
French	Listening B2 Reading B2 Writing B1 Spoken Production B1 Spoken Interaction B1
German	Listening A2 Reading A2 Writing A1 Spoken Production A1 Spoken Interaction A1
Albanian	Listening A2 Reading A2 Writing A1 Spoken Production A1 Spoken Interaction A1

Volunteering

08/2018 – 07/2020



Leader, ProV

Mexico

Led a social aid organisation supporting vulnerable communities across Tijuana, Baja California. Coordinated humanitarian initiatives including food preparation and distribution, fundraising, donation logistics, orphanage support, and elderly care. Oversaw volunteers, organised events, and optimised resources to maximise impact.

LINK: <https://www.facebook.com/groups/782118565323194>