Müsel Emmanuel Tabares Pardo

✉ muselemmanuel@hotmail.com   ☎ (+52) 663 104 6329

🌐 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)

Advanced Statistical Learning — From-scratch implementations of Monte Carlo, Bootstrap, PCA, regression (Ridge/Lasso), and classifiers with annotated theory and real datasets. LINK: https://github.com/musel25/Advanced_Machine_Learning

Hydrological Forecasting — Deep CNN pipeline predicting river stage from imagery; EfficientNet transfer learning and multi-modal inputs (visual + hydrological) for accuracy gains. LINK: 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. LINK: https://github.com/musel25/llm-metaheuristics

Nusselt–Reynolds via CFD — ANSYS CFD of forced convection over heated sphere; mesh convergence and validation against empirical Nu–Re correlations across Re regimes.

Flow Shop Scheduling — MILP in Python (PuLP) to minimise makespan and CO_2-eq emissions with big-M sequencing and weighted objective trade-offs. LINK: https://github.com/musel25/industrial_automation

Ramp Metering (ALINEA) — Freeway simulation evaluating open- vs closed-loop ALINEA across 10 demand scenarios using density, outflow, and average freeway KPIs. LINK: https://github.com/musel25/actm_control

Obesity Level Estimation — End-to-end classification on UCI obesity dataset; DR (PCA, t-SNE), mutual information, 31 models; best: XGBoost (96%). LINK: https://github.com/musel25/obesity_ml

CV Papers Review — Annotated reviews of 30+ core computer vision papers (ImageNet, CNNs, transfer learning, detection). LINK: https://github.com/musel25/cv_papers_review

NLP Projects — DistilBERT sentiment analysis, Levenshtein spell checker, and Keras RNN text generator with temperature tuning. LINK: https://github.com/musel25/nlp_projects

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. LINK: 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. LINK: 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

Skills (continued)

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

References

Available on Request