






Müsel Emmanuel Tabares Pardo

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About

Asking for an opportunity to show my talent in a Master's students Internship at Mistral. Passionate about LLMs and learning.

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

- 09/2024 – Current




Erasmus Mundus Master in Advanced Machine Learning and Optimisation Systems (EMSSE)

Universitat Politècnica de Catalunya | Barcelona, Spain (09/2024–01/2025)
Universiteti Politeknik i Tiranës | Tirana, Albania (03/2025–06/2025)
Université de technologie de Compiègne | Compiègne, France (05/2025–Current)
- 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


- 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.


- Hydrological Forecasting





Deep CNN pipeline predicting river stage from imagery; EfficientNet transfer learning and multi-modal inputs (visual + hydrological) for accuracy gains.


- 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.


- Obesity Level Estimation





End-to-end classification on UCI obesity dataset; DR (PCA, t-SNE), mutual information, 31 models; best: XGBoost (96%).


- 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.


- NLP Web App



Real-time text emotion classifier with logging and analytics; built using Streamlit and standard NLP preprocessing.



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 Coordinated a social aid organisation to support vulnerable communities.	Mexico LINK: ProV
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