

Melissa Fahed

Data Scientist & AI Engineer

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Profile

Motivated and detail-oriented Data Scientist with a strong background in computer science and software development. Skilled in Python, Java, and modern AI frameworks, with practical experience in machine learning, deep learning, computer vision, and data analysis. Passionate about transforming complex problems into innovative solutions and currently advancing expertise as a Master's student in Data Science & AI. Seeking opportunities to apply technical knowledge and creativity to impactful data-driven projects.

Education

Université Côte d'Azur Master 2 in Data Science & AI	2025–Present
Université Côte d'Azur Master 1 in Data Science & AI	2024–2025
Lebanese International University (LIU) Bachelor in Computer Science	2021–2024

Experience

AI Research Intern – Natural Disaster Impact Prediction from Satellite Imagery LIMOS	2026 – Present
- Developing deep learning pipelines for analyzing satellite imagery and predicting natural disaster impacts. - Building datasets combining EM-DAT, FLODIS, and satellite data using Google Earth Engine (GEE). - Working on flood-event analysis using before/after satellite imagery, change detection, and Earth Observation Foundation Models (EOFM). - Studying regression models for estimating disaster impact variables from Earth observation data. - Exploring multi-hazard learning strategies and evaluating model performance, efficiency, and memory usage.	

Projects

Facial Emotion Understanding in Videos — Research Project	2026
- Research on video-based facial emotion recognition under real-world conditions (DFER). - Study of self-supervised video Transformers (masked autoencoding, latent predictive learning). - Comparative analysis of VideoMAE, V-JEPA, EC-STFL, and MAE-DFER for emotion understanding.	
3D Scene Reconstruction – Image Matching Challenge Université Côte d'Azur	2025
- Developed feature-based computer vision pipeline (SIFT, FLANN, RANSAC) and graph clustering for coherent 3D scene reconstruction. - Evaluated performance using clustering metrics (Purity, ARI, NMI) and pose accuracy benchmarks. - Tools: Python, OpenCV, NumPy, Pandas, Matplotlib, NetworkX.	
Research Assistant – Ordinances of the Kings of France Project Sorbonne University – Centre Roland-Mousnier	2025
- Digitized and modernized medieval French legislative texts (1051–1514) using AI-powered OCR. - Encoded historical documents in XML-TEI for structured archival and research purposes. - Contributed to metadata tool development for advanced textual and historical analysis.	
Face Recognition (Computer Vision)	2025
- Designed an end-to-end face recognition pipeline for real-world classroom environments. - Implemented YOLOv8 for face detection and compared HOG+SVM with deep learning–based embeddings. - Applied data augmentation to improve robustness to lighting, pose, and noise. - Evaluated performance on noisy, unconstrained images and automated attendance report generation.	

Technical Skills

Programming & Tools: Python, Java, React, Git, SQL, Google Earth Engine (GEE)
Machine Learning & AI: Scikit-learn, TensorFlow, Keras, PyTorch, Deep Learning, NLP, Computer Vision
Data Science & Remote Sensing: Data analysis, Data visualization, Feature engineering, Model evaluation, Remote sensing, Satellite image processing, Geospatial data analysis, Earth observation, 3D reconstruction, Clustering

Soft Skills

Problem solving, Critical thinking, Effective communication, Teamwork, Leadership, Time management

Languages

English (Fluent), French (Intermediate), Arabic (Native)