

Ali Azzam

Phone: +961 70 654 802 | aliazzam2003@icloud.com | LinkedIn: <http://www.linkedin.com/in/ali-azzam2003>
GitHub: <https://github.com/Aly-Azzam>

PROFILE

Focused on the unglamorous part of AI — getting models out of notebooks and into systems that actually run. Experience across computer vision, LLM applications, and data pipelines.

WORK EXPERIENCE

AI Automation Engineer — Remote Consultant (Germany)

Remote | Aug 2025 – Present

- Designed and deployed 15+ production-grade automation workflows integrating AI components (LLMs, OCR, document parsing).
- Built an end-to-end expense reimbursement automation platform: PDF parsing, metadata extraction, and enterprise system integration.
- Developed robust error handling, monitoring, and alerting for mission-critical production pipelines.
- Leveraged n8n and Power Automate for workflow orchestration across cloud and on-premise systems.

AI Engineer Intern — Data Consult

Mkalles, Lebanon | Jun 2025 – Aug 2025

- Developed an AI-powered WhatsApp chatbot for medical appointment management using LLM APIs and NLP pipelines.
- Built document embedding and classification pipelines using vector databases and semantic search techniques.
- Delivered AI-assisted tender compliance analysis systems, reducing manual review time.

Software Developer Intern — Intalio

Antelias, Lebanon | Jun 2024 – Sep 2024

- Developed RESTful backend services in ASP.NET Web API; built responsive Angular front-end components.
- Improved system reliability and delivery speed in an Agile/Scrum environment.

FINAL YEAR PROJECT

AugMentor 2.0 — AI Video Skill-Assessment Platform (Mines Paris – PSL Collaboration) Jan 2026 – May 2026

- Built a full-stack AI platform (FastAPI + React + PostgreSQL) that automatically evaluates learner craft videos against expert references and delivers structured, gamified feedback — no expert presence required at evaluation time.
- Fine-tuned a YOLOv8s object detector on a custom-annotated egocentric dataset, replacing off-the-shelf detectors that failed entirely on domain-specific tooling; served as the detection foundation for the full pipeline.
- Implemented a multi-modal evaluation pipeline: SAM2 segmentation tracking, HSV + fitLine blade-angle estimation, RAFT optical-flow vibration detection with windowed FFT analysis, and DTW temporal alignment.
- Integrated a metric-constrained VLM explanation layer (Llama-4 / GPT-4o) with prompt engineering to eliminate hallucination and produce grounded, reproducible feedback; orchestrated the full pipeline as async background tasks.
- Stack: Python · PyTorch (CUDA) · FastAPI · PostgreSQL · React · OpenCV · NumPy/SciPy · ultralytics · segment-anything-2 · FFmpeg.

SELECTED PROJECTS

Air Quality Prediction — Machine Learning Regression Pipeline

Applied ML

- Built a supervised ML pipeline (Random Forest, Gradient Boosting) to predict PM2.5 pollution levels; full EDA, feature engineering, time-aware train/test split; evaluated with MAE and RMSE.

Industry 4.0 Intrusion Detection — IR-UWB Radar & Deep Learning

USJ Research

- Developed a human detection system under low-SNR conditions using CNN architectures (ResNet-18, AlexNet) and an SVM classifier trained on IR-UWB radar signals.

Paris Air Quality — Data Engineering Pipeline

ETL & API Project

- Designed an ETL pipeline with SQL storage, FastAPI data-serving layer, and Docker-ready deployment architecture.

EDUCATION

Université Saint-Joseph de Beyrouth (USJ) — ESIB *B.E. Computer & Communication Engineering*

Beirut, Lebanon

Final Year Project conducted in collaboration with Mines Paris – PSL

TECHNICAL SKILLS

Languages — Python · C++ · Java · C# · SQL · JavaScript · MATLAB

AI / ML — PyTorch · TensorFlow · scikit-learn · YOLOv8 · SAM2 · V-JEPA · MediaPipe · CNNs · SVM

Computer Vision — Object detection · image segmentation · optical flow · DTW · feature extraction · OpenCV

NLP & LLMs — LLM integration · prompt engineering · text embeddings · RAG · vector databases · semantic search

Data Engineering — ETL pipelines · FastAPI · REST APIs · PostgreSQL · SQLite · Pandas · NumPy · SciPy

Automation — n8n · Power Automate · workflow orchestration · PDF parsing · OCR

DevOps & Tools — Docker · Git · Linux · macOS · Windows · FFmpeg

Frontend — React · Angular · HTML5 · Canvas API

Spoken Languages — English (fluent) · French (fluent) · Arabic (native)