

# Lynn El Moussaoui

AI Engineer • MSc Artificial Intelligence Candidate (USJ)

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AI engineer with production experience across ML pipelines, RAG systems, and LLM-powered applications. Comfortable taking projects from data to deployment, including a Graph-RAG assistant, a GDP forecasting pipeline, and published research in federated learning. Finishing an MSc in AI at USJ.

## Education

### M.S. in Artificial Intelligence

Sep 2024 – May 2026 (Expected)

Saint Joseph University of Beirut (USJ) • Elected Academic Delegate • Board Member, ZAKA AI Club

### B.S. in Mathematics — Option: Data Science

Sep 2021 – May 2024

Saint Joseph University of Beirut (USJ) • Elected Academic Delegate • Google Developer Student Club

## Professional Experience

### M.Sc. Thesis in progress — Saint Joseph University of Beirut

Jan 2026 – May 2026

- Designing intelligent routing algorithms for power packet networks in a discrete state space; focus on graph-based routing, loss minimization, and RL-based control strategies.

### AI Engineer — AI Economic Pulse

Jun 2025 – Dec 2025

- Designed an end-to-end ML pipeline for GDP temporal disaggregation, producing **weekly economic estimates** from quarterly official data — enabling higher-frequency analysis for policy research.
- Trained and evaluated forecasting models using **scikit-learn** with time-aware cross-validation and hyperparameter tuning to prevent data leakage.
- Built a **FAISS**-based semantic similarity system to normalize and deduplicate job skill titles across heterogeneous labor-market datasets, improving cross-source comparability.
- Maintained production **PowerBI** dashboards on a monthly release cycle, supporting stakeholder reporting.

### Technical Ambassador (Volunteer) — ZAKA

Apr 2023 – Present

- Designed and delivered hands-on workshops on Python, ML fundamentals, and applied data science across **6+ institutions** (AUB, Lebanese University, BAU, USJ, Multilane, Michel Daher Foundation).

### Writer & Editor — Munchy Bytes Tech Blog

Aug 2023 – Present

- Publishes technical articles on AI/ML including [FAISS Similarity Search](#) and [MLOps 101](#), reaching practitioners and students.

## Self-Driven Projects

### Graph-RAG Marketing Assistant — Halytech

[View on GitHub](#)

- Built a production-ready RAG assistant to transform internal marketing documents into a fast, queryable knowledge base using **ChromaDB**, **OpenAI embeddings**, and a domain-specific knowledge graph.
- Implemented hybrid retrieval combining vector similarity search with structured graph traversal for improved context precision and reduced hallucination.
- Delivered a full-stack app with a **FastAPI** backend and **Vite** frontend, containerized with Docker for reproducible deployment.

## Publications & Recognition

### FedDQ: An Intelligent Federated Data Quality Assessment for Wireless Sensor Networks *IEEE MENACOMM 2025*

- Co-authored peer-reviewed paper on federated data quality assessment for resource-constrained wireless sensor networks.

### Featured Profile — L'Orient Le Jour

2024

- Profiled in Lebanon's leading French-language newspaper for contributions to AI ethics and science communication.

## Technical Skills

**AI & ML** PyTorch, TensorFlow, scikit-learn, LLMs, RAG, Graph-RAG, Embeddings, Similarity Search

**MLOps & Cloud** Docker, CI/CD, MLflow, AWS (EC2, S3, Lambda, SageMaker), OpenTofu

**Data & Tools** LangChain, FAISS, ChromaDB, PowerBI, Hadoop, NumPy, FastAPI

**Programming** Python (*primary*), SQL, R, C++