

JOE ELIE SARKIS

AI / MACHINE LEARNING ENGINEER | DATA SCIENCE & ANALYTICS

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PROFESSIONAL SUMMARY

Computer & Communications Engineering master's graduate and AUB AI & Data Science diploma graduate with hands-on experience building machine learning, deep learning, computer vision, LLM/RAG, analytics, and full-stack systems. Delivered a real-time embedded ASL recognition system with 98.21% test accuracy, a bilingual multimodal RAG assistant, and SQL-backed web applications. Strong in Python, SQL, model development and evaluation, APIs, data analysis, and translating requirements into reliable technical solutions.

TECHNICAL SKILLS

AI/ML: Python, PyTorch, TensorFlow/Keras, scikit-learn, pandas, NumPy, machine learning, deep learning, computer vision, NLP, LLMs, RAG

AI Frameworks & Deployment: LangChain, ChromaDB, Hugging Face, Gemini, OpenAI API, OpenCV, MediaPipe, FastAPI, ONNX, TensorRT, Jetson Orin Nano

Data & Analytics: SQL, Power BI, exploratory data analysis, feature engineering, model evaluation, data visualization, dashboarding, association rule mining

Software & Systems: REST APIs, ASP.NET Core, React, JavaScript, C#, Java, SQL Server, MySQL, Git/GitHub, Clean Architecture, JWT, information security fundamentals

PROFESSIONAL EXPERIENCE

Full-Stack Developer Intern | Integrated Digital Systems (IDS) | Remote | Jul 2025 - Sep 2025

- Developed SmartMeeting, a meeting management system using ASP.NET Core, React, SQL Server, REST APIs, and Clean Architecture.
- Implemented booking, invitations, meeting minutes, attachments, notifications, authentication, reporting, and PDF export while translating requirements into tested database-backed workflows.

Coding Instructor | Geek Express | Lebanon | Mar 2023 - Oct 2024

- Taught JavaScript, Roblox Studio, and block-based programming while coaching students in problem solving, debugging, and project delivery.

SELECTED PROJECTS

SignMatic - Real-Time ASL Recognition & Translation | M.S. Thesis | Python, MediaPipe, Transformer, TensorRT, Jetson

- Co-developed a 51-class skeleton-based ASL recognition system using MediaPipe Holistic and a Transformer encoder trained on 25,745 sequences; achieved 98.21% held-out test accuracy and 98.28% macro F1.
- Exported the Keras model to ONNX/TensorRT and deployed real-time inference on a Jetson Orin Nano with confidence and stability controls, English/Arabic text, and offline speech.

NomadScholar AI - Bilingual Multimodal RAG Assistant | AUB LLM Capstone | FastAPI, LangChain, ChromaDB, Gemini

- Built a scholarship and admissions assistant that retrieves grounded English/Arabic answers from curated official sources and user-uploaded PDFs and images.
- Implemented multilingual embeddings, OCR/PDF extraction, conversation memory, source-aware responses, and Pydantic checklist generation; documented 26 functional and retrieval-focused test cases.

Applied Machine Learning & Analytics | AUB Diploma Coursework | Python, scikit-learn, PyTorch/TensorFlow, Power BI

- Developed healthcare classifiers for Parkinson's voice diagnosis and antibiotic resistance prediction, CNN/transfer-learning image models, market-basket analysis, and business analytics dashboards.

EDUCATION

M.S., Computer and Communications Engineering | Lebanese International University | 2024 - 2026

Professional Graduate Diploma, AI & Data Science | American University of Beirut | 2025 - 2026 | **All grades: A+**

B.S., Computer Engineering | Lebanese International University | 2021 - 2024

LEADERSHIP & LANGUAGES

Leadership: Lebanese Red Cross Volunteer & Training Facilitator (2019 - 2025); led sessions and coordinated events for 200+ participants.

Languages: Arabic (native), English (full professional), French (limited working).