

Rami Assaf

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SUMMARY

AI Engineer with hands-on experience building LLM, RAG, agentic AI, and recommendation systems from data preparation to deployment. Skilled in Python, vector search, hybrid retrieval, prompt engineering, and machine learning, with experience delivering low-latency, cost-efficient AI solutions and practical projects across investment research, travel planning, resume screening, and predictive modeling.

CORE COMPETENCIES

Recommendation Systems, Retrieval Architecture, Agentic Workflows, Data Pipelines, Model Deployment, Hybrid Search, Feature Engineering, Cost Optimization, Latency Reduction, Anomaly Detection.

PROFESSIONAL EXPERIENCE

AI Engineer (Contract) | Tawasoul

May 2026 – Present

- Designed and built an end-to-end recommendation system on PostgreSQL (Supabase), matching AI-diagnosed communication skill gaps to a curated video catalog via tag-based retrieval.
- Architected a fetch-once ingestion pipeline using the ScrapingBee YouTube API to permanently cache video transcripts, eliminating live API calls and reducing recommendation costs.
- Scoped LLM usage strictly to explanation generation grounded in stored transcripts, keeping all recommendations deterministic, auditable, and paired with clear source attribution.

AI Engineer (Project-Based) | AI-Powered Recommendation System

January 2025 – May 2025

- Designed the full data preprocessing pipeline covering missing-value handling, categorical encoding, and feature scaling for salon service booking datasets in an end-to-end manner.
- Implemented UMAP-based dimensionality reduction for embedding visualization and analysis, improving recommendation accuracy by 20% across evaluated user interaction scenarios.

Data Science and Machine Learning Intern | OGTIP (Remote)

June 2023 – August 2023

- Built and deployed predictive models for college graduation outcomes, reaching 88% accuracy with tuned ensemble classifiers and earning a formal letter of recommendation.
- Developed a Convolutional Neural Network based image classifier achieving 90% accuracy, automating image sorting workflows for a professional photography studio client.

PROJECTS

AI Investment Research Agent

June 2026

- Building an autonomous research agent that ingests live gold and silver news feeds with resilient per-feed error handling, upgrading retrieval from keyword matching to dense semantic search for contextual market-signal extraction and Large Language Model powered summarization.

- **Technologies Used:** RAG, Agentic AI, LangChain, LangGraph, FastAPI, ChromaDB, FAISS, OpenAI Embeddings, Semantic Search, RSS Ingestion.

AI Travel Assistant

2025

- Deployed a multi-agent system that generates contextual travel itineraries through task decomposition and prompt engineering, addressing the slow and generic nature of manual planning, then containerized the application with Docker and hosted on AWS EC2.
- **Technologies Used:** CrewAI, Agentic AI, Multi-Agent Systems, LLM, Prompt Engineering, Task Decomposition, Docker, AWS EC2.

RAG-Powered Resume Assistant

2025

- Built a Retrieval Augmented Generation application using Mistral-7B to retrieve and rank top candidates by skill or experience, saving recruiter hours significantly, then deployed an interactive querying interface with Gradio for accessible real-time use.
- **Technologies Used:** RAG, LangChain, ChromaDB, Hugging Face, Vector Retrieval, Mistral-7B, Gradio, Open-Source LLMs.

Unsupervised Fraud Detection

2024

- Detected anomalous transaction patterns in highly imbalanced financial datasets using unsupervised learning with no labeled training data required, applying advanced pattern recognition techniques to surface hidden fraudulent activity for stronger downstream financial risk monitoring.
- **Technologies Used:** Anomaly Detection, Scikit-learn, Imbalanced Data, Pattern Recognition.

TRAINING AND CERTIFICATES

AI Learning and Community Career Accelerator Fakker.ai	Ongoing
The Complete Data Science Course Udemy	April 2025
AI and Machine Learning Bootcamp ZAKA	March 2023
Tableau for Data Science Udemy	October 2023

EDUCATION

Bachelor of Engineering in Mechatronics Engineering Rafik Hariri University	June 2023
Bachelor of Science in Industrial Engineering and Maintenance Lebanese University	August 2020

SKILLS

Technical Skills: Python, SQL, Git, GitHub, Docker, FastAPI, Jupyter, Gradio, Streamlit, LangChain, LangGraph, CrewAI, Hugging Face, OpenAI API, Qdrant, ChromaDB, FAISS, BM25, PostgreSQL, Pandas, NumPy, Scikit-Learn, TensorFlow, Keras, UMAP, Mistral-7B, OpenAI Embeddings, AWS EC2, Seaborn, Matplotlib, Tableau.

Soft Skills: Problem Solving, Team Communication, Attention to Detail, Fast Learner, Adaptability, Critical Thinking, Curiosity, Collaboration, Time Management, Ownership, Analytical Thinking, Continuous Learning.

LANGUAGES

Arabic (native), **English** (full professional proficiency).