

Adam Al Khatib

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Third-year Computer Science student at AUB (GPA 3.7) with hands-on experience building and deploying end-to-end AI systems. Actively upskilling in agentic AI development, LLM engineering, and RAG pipelines. Passionate about embedding AI responsibly into real-world products and workflows.

EDUCATION

American University of Beirut (AUB)

Bachelor of Science in Computer Science

Sep 2024 – May 2027

GPA: 3.7 / 4.0

Relevant Coursework: Machine Learning · Operating Systems · Software Engineering · Analysis of Algorithms · Data Structures · Computer Organization · Systems Programming

EXPERIENCE

Research Assistant — NLP, Robustness & Responsible AI

Nov 2025 – Present

AUB, Faculty of Arts and Sciences (Prof. Fatima Abu Salem)

Beirut, Lebanon

- Developing a robustness and bias evaluation framework for Arabic NLP models, designing controlled experiments to assess reliability under distribution shifts and adversarial inputs.
- Annotating a dataset of Arabic tweets on Lebanese political events for hate speech detection, contributing ground-truth labels for model training and evaluation.
- Applying explainability methods (SHAP, LIME, attention mechanisms) to interpret model predictions and surface failure modes across diverse demographic groups.

PROJECTS

MineGuard — ASIC Miner Anomaly Detection [github](#)

2026

Python · FastAPI · React · WebSockets · scikit-learn · PyTorch · Docker · Google Gemini API

- Built a full-stack real-time AI monitoring system, integrating Google Gemini via Server-Sent Events (SSE) as a streaming AI assistant that diagnoses hardware faults and recommends repair steps using live miner telemetry as context — a practical implementation of LLM API integration and context-aware prompting.
- Engineered 50+ features from raw ASIC telemetry and designed a two-tier ML pipeline: Isolation Forest for real-time anomaly scoring and an LSTM Autoencoder for temporal pattern detection, achieving ROC-AUC ~0.97 and F1 ~0.88.
- Implemented SHAP-based explainability to produce interpretable, feature-attributed alerts; validated the full system on physical fault tests on a live Antminer L3+, detecting anomalies within 60 seconds.
- Designed and consumed REST APIs throughout the stack (FastAPI backend, React frontend, WebSocket telemetry feed), with full Docker deployment.

RedReady — Emergency Response Platform [github](#)

2026

Python · Django REST Framework · Next.js · PostgreSQL

- Contributed backend development for a multi-role emergency readiness platform, owning Django ORM data modeling, REST API design, and integration with a Next.js frontend across a team of 5.

TECHNICAL SKILLS

Languages: Python, Java, C, C++, JavaScript, SQL

AI / LLM: LLM API Integration (Claude, OpenAI, Gemini), Prompt Engineering, Agentic AI, RAG, Vector Stores, Tool Calling

ML / DL: PyTorch, TensorFlow, scikit-learn, Hugging Face Transformers, SHAP, LIME, Isolation Forest, LSTM

Backend & APIs: FastAPI, Django REST Framework, REST APIs, WebSockets, Docker, PostgreSQL, SQLAlchemy

Data & Analysis: Pandas, NumPy, Matplotlib, Seaborn, Feature Engineering, EDA

Tools: Git, Jupyter Notebooks, Linux, React, Next.js

CERTIFICATIONS & ACTIVE COURSEWORK

Machine Learning Specialization — Coursera / Andrew Ng

2025

Deep Learning Specialization — Coursera / Andrew Ng

2025

LLM Engineering: Master AI & Large Language Models — Udemy

In Progress

The Complete Agentic AI Engineering Course — Udemy

In Progress

Generative & Agentic AI in Production — Udemy

In Progress