

Sleiman El Hajj

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EDUCATION

Lebanese American University (LAU)

B.E. in Computer Engineering

Byblos, Lebanon

May 2026

- **Relevant Coursework:** Data Structures, Software Engineering, Deep Learning, LLMs, Intelligent Algorithms.

EXPERIENCE

Software Engineer (Part-time) | *Angular 15, TypeScript, CSS, Tailwind, .NET*

Globalistic Tech Offshore

Apr 2025 – May 2026

Byblos, Lebanon

- Develop backend and frontend features for *Inframappa*, a U.S.-based infrastructure mapping platform serving universities, hospitals, and municipalities with orthorectified imagery, digitized engineering drawings, and field-verified assets.

Undergraduate Researcher

Lebanese American University (LAU)

Sep 2025 – Present

Byblos, Lebanon

- Recipient of the **Mitacs Globalink Research Award**, conducting research at Université TÉLUQ on computational models of drug interaction and response.
- Develop and evaluate deep learning architectures (CNNs, RNNs, Transformers, GNNs) for Drug–Target Interaction prediction on biomedical datasets, including hybrid quantum–classical approaches.

PROJECTS

Waladi | *Python, MQTT, FastAPI, Node.js, PostgreSQL/TimescaleDB, React Native, Expo*

Jan 2026 – May 2026

- Built an IoT infant health monitoring system on a Raspberry Pi with mmWave radar, thermal camera, and SHT31 sensors, tracking heart rate, breathing rate, and body/ambient temperature in real time.
- Designed a multi-service sensor orchestration backend with a time-series data pipeline backed by PostgreSQL/TimescaleDB and live SSE streaming to a cross-platform mobile app with historical data views and device pairing.

Wazefne | *Angular 21, Node.js, PostgreSQL, Clerk, Supabase, Google Gemini, Vercel*

Feb 2026 – May 2026

- Built a full-stack freelancer marketplace featuring a job board, bidding system, offer lifecycle management, reviews/ratings system, and real-time messaging via Supabase.
- Integrated multi-provider OAuth (Clerk), Supabase file storage, and an AI-powered CV analyzer using Google Gemini that parses PDF/DOCX uploads and returns structured scores, strengths, and improvement suggestions.

Employee Assistant Agent | *LangChain, LangGraph, Google Gemini, FAISS, SQL*

Nov 2025 – Dec 2025

- Designed a ReAct-based LLM agent using LangChain/LangGraph and Google Gemini to support warehouse operations through natural language, integrating SQL tools for inventory, sales, and order tracking with RAG over PDF documents via FAISS vector stores.

Hypoglycemia Detection | *PyTorch, 1D CNN, BiLSTM, Focal Loss, SMOTE, Grad-CAM*

Nov 2025 – Dec 2025

- Developed a hybrid architecture (1D CNNs, SE blocks, BiLSTMs, Attention) for non-invasive hypoglycemia detection from ECG signals, achieving an **81.05% F1-score** and **0.98 ROC-AUC**.
- Addressed severe class imbalance with Focal Loss and SMOTE; applied Grad-CAM and attention visualization to validate the physiological relevance of learned ECG features.

Search Agent | *Python, React.js, Flask, A*, BFS, Reinforcement Learning*

Jan 2025 – May 2025

- Developed an intelligent search agent using classical search (A*, BFS), reinforcement learning, and evolutionary algorithms for path and shape formation, with a React.js visualization frontend and Flask backend.

EXTRACURRICULAR ACTIVITIES

Vice President, IEEE Electronics & Aeronautics Club

Sep 2025 – May 2026

SKILLS

Programming: Java, Python, JavaScript/TypeScript, C#, Assembly

Frameworks/Tools: React, React Native, Angular, Node.js, Express.js, .NET, FastAPI, Git

Data & AI: PostgreSQL, MongoDB, TensorFlow, PyTorch, LangChain, FAISS

Languages: Arabic (Native), English (Fluent)