Hiba Zaiour

Beirut, Lebanon • +961 71 531 907 • hiba.zaiour@lau.edu

EDUCATION

Lebanese American University (LAU) — Beirut, Lebanon Sep 2023 – May 2026
Bachelor of Science in Computer Science

- CGPA: **3.7 / 4.0**
- Dean's Distinction List
- **Baccalaureate Scholarship (50%)** awarded for scoring **18.67 / 20** and ranking **10th** in the Lebanese Official Exams

SKILLS

Programming Languages: Python, Java, JavaScript, PHP, SQL, HTML/CSS, C, MATLAB
Frameworks & Libraries: PyTorch, LSTM, Transformers, NumPy, Pandas, Matplotlib, .NET
Networking & Systems: Wireshark, TCP/IP, HTTP/HTTPS, Socket Programming, Proxy Servers, Network Protocol Analysis
Concepts & Technologies: REST APIs, Multithreading, Caching Mechanisms, Database Normalization, NLP, Sequence Modeling, Deep Learning, Machine Learning, Graph Theory, Hyperspectral Imaging
Tools & Platforms: Android Studio, Git, SQL/Relational Databases, WordPress
Soft Skills: Technical Tutoring & Mentorship, Communication, Problem Solving

RESEARCH EXPERIENCE

Bachelor's Thesis

Lebanese American University – School of Arts and Sciences Jan 2026 – May2026

- Conducting research on detecting attacks against UAV systems by analyzing both cyber and physical features of the UAV system. Graph theory is used to model the topology of different attack types, which is then utilized as input to a deep learning model for attack classification.
- **Project:** *A Deep-Learning Based Approach for Photovoltaic Forecasting Using Symbolic Graph Representations*
- **Supervisor:** Dr. Rachad Atat

Machine Learning Research – UAV Human Detection

Lebanese American University – School of Arts and Sciences Sep 2025 – Present

- Conducting research on machine learning methods for human detection in UAV search and rescue missions using thermal and RGB sensors.
- **Project:** *Multi-UAV Path Planning with RGB-Thermal Human Detection in Earthquake Search and Rescue under Realistic Environments*
- **Supervisor:** Dr. Nadine Abbas

Research Assistant

Lebanese American University – School of Arts and Sciences Jul 2025 – Oct 2025

- Working on a machine learning research project utilizing hyperspectral imaging and clustering algorithms to develop a powerful technique for digital dewaxing of paraffin-tissue embedded biopsy samples.
- **Project:** *Digital Dewaxing of Paraffin-Tissue Embedded Biopsy using Hyperspectral Imaging*
- **Supervisor:** Dr. Abbas Rammal

PROJECTS

Emotion Shift Detection in Conversations

Deep Learning (CSC464) March 2026 – April 2026

- Developed a system to detect emotional transitions across multi-turn dialogues using the MELD dataset (Multimodal EmotionLines), which contains speaker-annotated utterances labeled with emotions and sentiments. Modeled conversations as sequences using LSTM and compared performance against a transformer-based model to evaluate each architecture's ability to capture emotional dynamics across dialogue turns.
- **Technologies:** Python, PyTorch, LSTM, Transformers, MELD Dataset, NLP, Sequence Modeling

Caching Proxy Server

Computer Networks (CSC430) March 2026 – April 2026

- Designed and implemented a multithreaded HTTP/HTTPS caching proxy server from scratch using raw socket programming. Features include response caching with Cache-Control header support, blacklist/whitelist URL filtering with subdomain matching, comprehensive request logging, HTTPS blind tunneling via the CONNECT method, and a live web-based admin dashboard for real-time monitoring and dynamic filter management.
- **Technologies:** Python, Sockets, Threading, HTTP Protocol, HTML, CSS, JavaScript

Municipality Management System

Software Engineering (CSC490) Sep 2025 – Dec 2025

- Developed a web-based system connecting citizens with municipality staff to request official documents, submit feedback and complaints, and track request progress.
- **Technologies:** Java, HTML, CSS, JavaScript, PHP

Study Tracker Mobile Application

Mobile Development (CSC431) Jan 2025 – May 2025

- Built a mobile application to help students track study habits and monitor academic progress.
- Implemented features including daily study logging, goal setting, and progress visualization.
- **Technologies:** Java, Android Studio, Shared Preferences, SQL

Interactive AI Course Website

Web Development (CSC443) Jan 2025 – May 2025

- Developed a full-stack educational website providing an interactive AI course for beginners and enthusiasts.
- **Technologies:** HTML, CSS, JavaScript, PHP

Concert Database Management System

Database Management Systems (CSC375) Jun 2024 – Jul 2024

- Designed and implemented a database system for managing concert event data including artist profiles, schedules, ticket sales, and audience demographics.
- Applied database normalization techniques to ensure efficient data storage.

Reduced Instruction Set Computer (RISC) Processor

Computer Organization (CSC320) Apr 2024 – May 2024

- Designed and implemented a Reduced Instruction Set Computer processor, including architecture, instruction set, and data path structure.
- Focused on optimizing system performance through simplified instruction execution.

WORK EXPERIENCE

Full Stack Web Developer

IDS Company – Internship Dec 2025 – Feb 2026

- Contributed to developing a full stack academy website. Used HTML, CSS, JavaScript for the frontend and PHP and RESTful API for the backend.

WordPress Developer
Freelancer
- Built and customized client websites using WordPress, including theme customization, plugin integration, and content management.

Object-Oriented Programming Tutor
Private Tutor
- Taught first-semester students programming fundamentals including problem solving, functions, recursion, binary search, and sorting algorithms.

Algorithms and Data Structures Tutor
Private Tutor
- Tutored second-year students in algorithms and data structures, strengthening their analytical thinking and problem-solving skills.

Physics Tutor (Volunteer)
MMKN NGO Feb 2024 – May 2024
- Delivered extra physics sessions for grade 9 students in underprivileged schools to help them prepare for their official exams.