

MOHAMAD SAMHOUN

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Education

Lebanese American University
Bachelor of Science in Computer Science

Spring 2026
Beirut, Lebanon

Experience

Sibline Cement Company
IT Intern

Feb 2026 – Apr 2026
Sibline, Lebanon

- Built multi-tier DFAI approval workflow system automating procurement request routing through sequential approval chains with email notifications and role-based access control.
- Designed and implemented dual-form cement quality testing system: initial form captures lab sample metadata (timestamp, extraction level), second form records test results; HOD reviews and approves results before cement is released to clients, with automated notifications and secure database archival.
- Engineered real-time Google Sheets API integration for asset tracking and inventory management, enabling supervisors to monitor equipment lifecycle, ownership history, and resource allocation.

Selected Projects

First Step Counseling Center, Kuwait | Javascript, HTML, CSS

June 2026

- Built full-stack staff evaluation SPA for Kuwait counseling center handling 16+ clinical domains with real-time analytics for 30+ employees.
- Designed interactive dashboards (radar charts, KPIs) enabling supervisors to track team performance and training needs.

KrAltos | React Native, Groq API, Firebase, Python

May 2026

- Designed adaptive fitness platform using multi-model LLM reasoning (Groq Llama 3.3 70B, Scout 17B) for personalized workout and nutrition plans.
- Implemented dual dashboards (coach + user) with real-time progress tracking, wearable integration, and gamification improving user adherence.

Production-Grade 3-Tier AWS Architecture with CI/CD | AWS, CodePipeline, CodeBuild, CodeDeploy

May 2026

- Designed and deployed 3-tier web application on AWS spanning 2 Availability Zones with VPC, Auto Scaling, and multi-AZ RDS MySQL.
- Implemented automated CI/CD pipeline with GitHub webhooks, CodeBuild, and CodeDeploy for zero-downtime deployments and rollback strategies.

Explainable Object Detection under Adverse Weather | PyTorch, CNN, Research

December 2025

- Conducted research on uncertainty-aware object detection framework enhancing reliability of autonomous driving under adverse weather conditions.
- Published findings in peer-reviewed paper combining deep learning with explainability techniques for safety-critical AI applications.

Vampire Survivor Game Development 2D | Unity, C#

November 2025

- Developing action-survival game featuring enemy wave mechanics, dual-world transitions, and sophisticated enemy AI behavior patterns.
- Implemented collaborative version control via GitHub with scalable game architecture and reusable component design.

Waselne Application | Android Studio, Java, Firebase, Google Maps API

May 2025

- Developed real-time LAU campus bus tracking application optimizing route planning with live location updates and push notifications.

Mad Readers | Software Engineering

May 2025

- Developed online bookstore system covering all software development phases from requirements analysis to system design and implementation.

Certifications

Machine Learning Specialization <i>Stanford University (Coursera)</i> Completed 3-course specialization: Supervised Learning, Advanced Learning Algorithms, and Unsupervised Learning including clustering and reinforcement learning.	Dec 2024
AI Bootcamp <i>ZAKA AI</i> Completed bootcamp covering Data Science Fundamentals, Machine Learning Techniques, CNN, NLP, and MLOps with real-world capstone: Arabic Fake News Detection using NLP.	Oct 2025

Skills

Frontend: React Native, HTML, CSS, JavaScript
Backend: Python, JavaScript, Java, Node.js, Express.js, Google Apps Script
AI/ML: TensorFlow, PyTorch, Scikit-learn, LLM tool-use (Groq, Claude API), computer vision, NLP
Databases: Firebase, Google Sheets API, Oracle Database, SQL
Cloud & DevOps: AWS (S3, IAM, CloudWatch, EC2, Lambda), CodePipeline, CodeBuild, CodeDeploy, Docker
Tools & Platforms: Git/GitHub, Android Studio, Unity
Languages: English (Fluent), Arabic (Native)

Leadership

Scout Administrative Leader <i>Lebanese Scout Association</i>	Aug 2022 – Present <i>Sidon, Lebanon</i>
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