

AHMAD KARNIB

Beirut, Lebanon

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EDUCATION

American University of Beirut

August 2023 – Expected June 2027

BEng in Computer and Communications Engineering

Dean's Honor List

Relevant Coursework: Introduction to Computation and Programming, Data Structures and Algorithms, Computer Networks, Software Engineering, Cryptography and Network Security, Introduction to Machine Learning

TECHNICAL SKILLS

Programming Languages: C++, Python, Verilog, Assembly, MATLAB, HTML, CSS

Databases: SQL, SQLite

DevOps: Docker, Jenkins, CI/CD

Tools: Git, Jira, Figma, Visual Studio Code, Android Studio

Networking: TCP/IP, routing & switching basics, troubleshooting

Soft Skills: Creativity, Problem-Solving, Communication, Teamwork, Leadership, Strategic Thinking

Languages: English (Fluent), Arabic (Native), French (Fluent)

WORK EXPERIENCE

IT Assistant, American University of Beirut (AUB)

Aug 2025 – Present

- Providing technical support for faculty, staff, and students, ensuring smooth operation of IT systems.
- Assisting in troubleshooting, software installation, and network maintenance to improve efficiency.

Computer Networking Internship, Dar Al Handasah Nazih Taleb & Partners – Lebanon

Dec 2023 – Jan 2024

- Conducted hands-on tasks in computer networking, including network setup, troubleshooting, and maintenance.
- Gained practical experience with real-world networking environments and improved technical problem-solving skills.

RESEARCH EXPERIENCE

Undergraduate Researcher, American University of Beirut (AUB)

Aug 2025 – Present

- Develop ML methods for transportation mode recognition using smartphone and cellular network signals.
- Engineer features from mobility and signal patterns, train baseline models, and evaluate performance using standard metrics.
- Explore resource-efficient and privacy-preserving approaches for on-device or low-data settings in mobile sensing and IoT.

PROJECTS

Student Registration App

May 2025

- Developed a student registration platform with features for course add, drop, and schedule viewing.
- Implemented client-server communication over TCP sockets to handle student requests and real-time updates.
- Built backend logic for course capacities, time-conflict checks, and user authentication.

PharmFind – Medicine Finder and Delivery App

Sept 2025

- Built a mobile and web platform for Lebanon to help patients find medicines during stockouts using real-time pharmacy availability, with pickup or home delivery.
- Implemented the end-to-end MVP workflow: medicine search, list/map availability, order placement, prescription validation, cash on delivery, basic delivery tracking, plus a pharmacy portal for stock updates and order acceptance.
- Designed the relational database and system architecture (patient app, pharmacy portal, driver module, admin dashboard), containerized services with Docker, and set up a Jenkins CI pipeline for automated builds and deployments.

Cryptography – AES Modes Web Platform

Nov 2025

- Implemented AES encryption/decryption in five modes (ECB, CBC, CFB, OFB, CTR) with support for AES-128/192/256.
- Built a web UI for text and file encryption, including batch processing with ZIP export, key generation, and HEX/Base64 output toggles.
- Validated correctness using NIST SP 800-38A test vectors and round-trip tests across multiple modes.
- Used SQL (SQLite) for sign-up/sign-in and to persist user preferences and settings across sessions.

LEADERSHIP AND ACTIVITIES

AUB Outdoors, Operation & Logistics Coordinator

2025 – Present

- Coordinate logistics and on-site operations for club events and trips, including transportation planning and equipment allocation.
- Support event execution by coordinating volunteers, timelines, and check-in workflows to ensure smooth operations.

Engineering Student Society, Event Officer

2024 – Present

- Plan and organize workshops, speaker sessions, and student engagement events in collaboration with peers and faculty.
- Manage event logistics (venue, scheduling, communications) and coordinate volunteers to deliver events smoothly.