

AHMAD KARNIB

Beirut, Lebanon

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EDUCATION

American University of Beirut
B.E. in Computer & Communications Engineering

August 2023 – Expected June 2027

Dean's Honor List

Relevant Coursework

- Data Structures & Algorithms
- Signals and Systems

TECHNICAL SKILLS

Languages: Python, C++, JavaScript, MATLAB
Systems: Linux fundamentals, Networking basics (TCP/IP, DNS), HTTP basics
Containers & CI/CD: Docker, Jenkins, GitHub
Cloud Concepts: VPC basics, monitoring fundamentals
Tools: VS Code, Jira, LaTeX
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

- Troubleshoot day to day system, software, and connectivity issues for faculty, staff, and students, prioritising fast resolution and clear communication.
- Support software installation, workstation setup, and basic network maintenance, documenting recurring issues and fixes.

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

Dec 2023 – Jan 2024

- Assisted with network setup and troubleshooting in a real environment, including connectivity checks and basic maintenance tasks.
- Built stronger debugging habits by working through practical issues under time constraints.

Art Gallery Assistant (Work-Study Program), AUB Byblos Bank Art Gallery |

June 2025 – Present

- Led gallery tours, supported inventory/front desk operations, and assisted with exhibition setup and artwork preservation.

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 by checking pharmacy availability in real time and enabling pickup or home delivery.
- Implemented the core MVP workflow: medicine search, pharmacy availability (list + map), order placement (pickup/delivery), prescription validation, cash-on-delivery, and basic delivery tracking, plus a pharmacy portal for stock updates and order acceptance.
- Designed the system architecture covering patient app, pharmacy portal, driver module, and admin dashboard, containerised components with Docker, and set up a Jenkins pipeline to automate builds and deployments.

Digital Communication Systems Project |

Sept 2025

- Built MATLAB modules for signal representation, including Nyquist sampling and Fourier series approximation, to demonstrate aliasing and reconstruction accuracy.
- Implemented quantization schemes (two-level, uniform multi-level, Lloyd-Max), measuring MSE and analyzing rate-distortion performance.
- Integrated modules into an end-to-end digital communication chain, comparing throughput, entropy, and coding efficiency under different quantization methods.

Cryptography – AES Modes Web Platform	Nov 2025
<ul style="list-style-type: none"> • 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. 	

LEADERSHIP AND ACTIVITIES

AUB Outdoors — Operations Team Member	May 2025
<ul style="list-style-type: none"> • Supported event logistics, operations, and crowd management. 	
Engineering Student Society — Event Officer	2024 – Present