

AYA AYOUBY

Computer and Communication Engineer

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Profile

Results-driven **Software and Computer Engineer** with dual degrees in **Master's Research (Telecom, Networks & Security)** and **BE in Computer & Communications Engineering (July 2025)**. Strong expertise in **programming, web development, and software systems**, complemented by solid foundations in **telecommunications, security, and machine learning**. Passionate about developing innovative solutions and continuously learning, with the ability to connect theoretical knowledge to practical software applications.

Education

Master's Research Program – Telecom, Networks & Security

Lebanese University & Université Saint Joseph.

(Graduated: July 2025)

BE in Computer & Communications Engineering Lebanese University. (Graduated: July 2025)

Lebanese Baccalaureate – General Science

Collège des Filles de la Charité - Dar En-Nour (2005–2020)

Experience

Research Intern – Data Management in the Multimodal Era: Applications in Healthcare 2025

- University research project (LU and USJ) exploring advanced data integration and management for healthcare.
- Reviewed cutting-edge methods (semantic web, ML, blockchain, context-aware quality).
- Built a POC integrating these technologies to boost interoperability, security, and data quality for multimodal healthcare data.

- Applied Natural Language Processing (NLP) techniques to analyze and structure clinical notes, improving usability of unstructured data.
- Gained exposure to healthcare interoperability standards including HL7, ICD and DICOM.
 - Worked on multimodal data integration to enhance consistency, security, and usability across heterogeneous healthcare systems.

AI Training – Alemni Foundation, 2024

- Focused on AI fundamentals, ML models, and real-world applications.

Intern – OGERO MINA Center, 2023

- Worked on telecommunications systems and infrastructure, including IMEWE submarine cable operations, data access, switching, and data transmission processes.

Technical Skills

Programming & Data: Python, Java, C#, Matlab, SQL, FAISS

Web Development: HTML, CSS, JavaScript, ASP.NET

Networking & Telecom Tools: Wireshark, Cisco Packet Tracer

Big Data & Distributed Systems: Apache Kafka, Hadoop, Spark

Blockchain & Security: Hyperledger Fabric, Cryptography (AES, RSA), Consent & Access Control

Hardware & Embedded Systems: Arduino, Raspberry Pi, Assembly

Modeling & Design Tools: LabView, AutoCAD, OrCad, Proteus

Operating Systems & DevOps Tools: Linux, Docker

Other: Object-Oriented Programming (OOP), Microsoft Office Suite

Projects

- **RMI Java App:** Attendance & student info system
- **LEACH Protocol Analysis:** Performance evaluation for energy-efficient routing in wireless sensor networks
- **ML Projects:** Suspicious link detection
- **Face Recognition:** System on Raspberry Pi
- **Voice Noise Removal:** Python-based application
- **Restaurant App:** C# app using APIs
- **Car Rental System:** SQL database project

Languages

English | French | Arabic
