

# Aya Mostafa Ayoubi

Computer and Communication Engineer

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## Profile

Software Engineer with dual master's degrees in Research in Telecommunications, Networks and Security, and in Computer and Communication Engineering.

Strong background 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.

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## Education

### Master's Research Program – Telecom, Networks & Security

*Lebanese University & Université Saint Joseph de Beyrouth 2024  
- 2025*

### Bachelor of Engineering – Computer & Communication Engineering

*Lebanese University  
2020 - 2025*

### Lebanese Baccalaureate – General Science

*Collège des Filles de la Charité – Dar En-Nour*

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## Experience

### 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.
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## Technical Skills

**Programming & Data:** Python, Java, C#, MATLAB, FAISS

**Databases:** SQL, MongoDB

**Web Development:** HTML, CSS, JavaScript, ASP.NET, WebSockets, REST APIs, XML

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

**Blockchain & Security:** Hyperledger Fabric, Cryptography

**Hardware & Embedded Systems:** Arduino, Raspberry Pi, Assembly

**Modeling & Design Tools:** LabView, AutoCAD, OrCAD, Proteus

**Operating Systems, Cloud & DevOps Tools:** Linux, Docker, Git, Microsoft Windows

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

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## Projects

### Final Year Project (Research)– Data Management in the Multimodal Era: Applications in Healthcare, 2025

- University research project (LU and USJ) exploring advanced data integration and management for healthcare.
- *Paper accepted for presentation at the 14<sup>th</sup> International Conference on Health and Social Care Information Systems and Technologies (HCist 2025): “Next-Generation Multimodal Data Governance in Healthcare: Integrating Blockchain, Quality Assurance and Semantic Intelligence.”*
- 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.

**RMI Java App:** Attendance & student info system

**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

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## Languages

English | French | Arabic

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