# Abed El-Rahman Mneimneh

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## EDUCATION

**Lebanese American University** <span style="float:right">**June 2025**</span>

*Bachelor of Engineering in Computer Engineering* <span style="float:right">*Beirut, Lebanon*</span>

## WORK EXPERIENCE

**Ogero** <span style="float:right">**May 2024 – August 2024**</span>

*Telecommunications Engineering Intern* <span style="float:right">*Beirut, Lebanon*</span>

- Designed fiber optical network solutions for telecommunications infrastructure, including FTTx (Fiber to the X) networks.
- Gained hands-on experience in fiber optic splicing, connecting fiber optic cables for network installation and maintenance, ensuring signal integrity and network continuity
- Developed a deep understanding of the roles and configurations of MDF, ODF, and DSLAM systems through detailed study during site visits, exploring their integration within the telecom network.
- Exposed to advanced telecom testing equipment such as OTDR, iOLM, Sidekick, and Dynatel, gaining insights into how these tools are used to diagnose and maintain both copper and fiber networks.
- Assisted with copper cables and optical fiber testing to get performance metrics and locate any issues ensuring efficient signal transmission and minimal losses.

## ACADEMIC PROJECTS

**Peer-to-Peer Energy Trading Project** | *Python, Scikit-Learn, IoT, ESP32, MQTT* <span style="float:right">**May 2025**</span>

- Collaborated with other another team member to build incremental machine learning models (Python, Scikit-Learn) predicting the prosumer energy consumption patterns.
- Designed and implemented an IoT system (ESP32, AWS IoT Core, Sensors) for trading energy and monitor energy flow (voltage, current, SoC), transmitting real-time data and commands via MQTT.
- Collaborated cross-functionally with blockchain, machine learning, front-end team to ensure seamless interoperability between hardware, cloud platforms (AWS), and web application.

**License Plate Recognition** | *MATLAB, Digital Image Processing* <span style="float:right">**May 2025**</span>

- Built a MATLAB software to detect and recognize license plates using image processing (edge detection, morphological operations) and template-matching OCR.
- Improved detection accuracy by filtering candidates via aspect ratios and noise reduction techniques.
- Designed a custom OCR module to segment and classify characters from localized plates.

**"MyCelio" Platformer Game** | *Unity, Firebase, C#* <span style="float:right">**May 2024**</span>

- Developed the cloud save system of a Unity-based game with Firebase integration for managing user progress.
- Implemented user authentication, data persistence, integration to save/retrieve data from Firebase.
- Assisted with debugging and with implementing the local save system.

## SKILLS AND LANGUAGES

**Programming:** Java, JavaFX, C#, Assembly Language, Python, Verilog, VHDL.
**Data and Machine Learning:** Keras, Scikit-Learn, NumPy, Pandas, Matplotlib, MySQL
**Tools:** Unity, Firebase, SceneBuilder, Git and GitHub, Visual Studio Code, MATLAB, PSpice, Microsoft Office Suite.
**Soft Skills:** Teamwork, Analytical Mindset, Adaptive Person, Creative Thinking
**Languages:** Fluent in spoken and written English, French, and Arabic.

## EXTRACURRICULAR ACTIVITIES

**Lebanese American University** <span style="float:right">**Beirut, Lebanon**</span>

- Previous member in the IEEE Logistics Automation Club and IEEE Artificial Intelligence Club     2023-2024