



Elias Antoun

Date of birth: | **Place of birth:** | **Nationality:** Lebanese | **Phone number:**
| _____ | **Address:** Roma, Italy (Home)

WORK EXPERIENCE

CAELUS SRL – ITALY

PIPELINE DESIGNER FOR NUCLEAR REACTOR DIGITAL TWIN - THESIS – 2025 – 2025

Design and Evaluation of a sensor-to-server pipeline based on industrial IoT and federated learning in order to create a digital twin for a nuclear reactor - new and legacy. Design considerations include feasibility studies in harsh environments, cybersecurity and internal workings of the devices at each level (edge, central server, gateway, ...).

FREELANCE – ITALY

INDEPENDENT PROJECTS – 2024 – 2025

Independed Projects and Collaborations centered around data handling, machine learning and AI training. Most notable projects are:

- StudentBridge, a startup idea proposed in CyberHack4AI in October 2024, and currently being carried out by a team of 3.
- Training and initial deployment of an AI model that helps with client acquisition and handling - currently limited to some real estate agencies in Lebanon.
- Collaboration on the R&D of a "predictive maintenance" machine learning pipeline - to be deployed in small-scale Lebanese industires.
- Collaboration on the online data collection, handling and preprocessing for supply planning and marketing - used with an agricultural company in Lebanon.

TEP RENEWABLES – ITALY

PV DESIGN ENGINEER – 2024 – 2024

Responsible for the origination and design of photovoltaic fields and Battery energy storage systems (Gis, AutoCAD, PVCASE, SolarEdge,...), performance analysis (PVSyst), and grid connection (single-line diagrams).

ASSIGNMENTS LAB – LEBANON

REMOTE TUTOR – 2020 – 2022

Tutored Physics, Mathematics, English, French, and SAT preparatory sessions

ANTOUN WOODWORKING – LEBANON

MACHINE OPERATOR & MAINTENANCE – 2018 – 2020

Operated and maintained CNC and digital-interface woodworking machinery; managed workforce, clients, and finances as needed.

EDUCATION AND TRAINING

2020 – 2023 Torino -, Italy

BACHELOR'S DEGREE IN MECHANICAL ENGINEERING Politecnico di Torino

Website <https://www.polito.it/> | **Level in EQF** EQF level 6

2023 – CURRENT Roma -, Italy

MASTERS DEGREE IN DATA SCIENCE Sapienza University of Rome

Website www.uniroma1.it | **Level in EQF** EQF level 7

● HONOURS AND AWARDS

2017

Second Place - Junior Mubarat el Ouloum Lebanon - National Association of Science and Research

Designed and built a solar-powered and fully automated planting robot in a team of 3. The competition took place in my junior year of high school and involved teams from 183 schools across Lebanon.

2018

Second Place - Model United Nations Lebanon - United Nations

Achieved second place in the Historical Security Council MUN, where the competition was a 2 day crisis resolution debate following 5 intensive training sessions on negotiation, diplomacy, crisis-management, and research skills

2023

Scholarship and Premio di Laurea - Politecnico di Torino - EDISU

2025

Scholarship and (tentatively) Premio di Laurea - La Sapienza - DisCo Lazio

● LANGUAGE SKILLS

Mother tongue(s): **ARABIC**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
FRENCH	C1	C1	C1	C1	C1
ENGLISH	C2	C2	C2	C2	C2
ITALIAN	C1	C1	B2	B2	B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● SKILLS

Mechanical

AutoCAD | QForm - Simulation analysis and optimization of metal forming processes | PVcase | PVSyst | Matlab/Simulink | Solidworks

Data Science

Python (computer programming) | Federated Learning | machine learning | Internet of Things | data management | Arduino | Cognos | AI prompting | cloud computing | Recommendation systems | Web Scraping

General

Adobe Photoshop | office software