Rayan
ABDUL SAMAD EL SKAFF
Electrical and Computer Engineer

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Tripoli, Lebanon

LANGUAGE

- English: C2 Proficient
- French: B1 Intermediate
- Arabic: Native

SOFTWARE

- Python / C++
- MATLAB / Simulink
- ROS (Robot Operating System)
- SQL
- Flutter
- Ubuntu (Linux)
- Labview

SOFT SKILLS

- Leadership
- Team-Building
- Organization
- Adaptibility

EDUCATION

American University of Beirut — **Beirut, Lebanon**

From 09/2021 to 06/2025

- Bachelor's in electrical and computer engineering, with a track in control systems and robotics
- *Dean's honor list for the academic year 2023-2024*

Rawdat El Fayhaa Secondary School — **Tripoli, Lebanon**

From 09/2007 to 07/2021

- Lebanese baccalaureate: official in 2021. Mention: Very Good

EXPERIENCE

Internship, GIPSA lab - Université de Grenoble Alpes — **Grenoble, France**

From 06/2024 to 07/2024

- Modeled and controlled, using MATLAB, an unmanned aeriel vehicle (UAV) and an unmanned ground vehicle (UGV) robot for cleaning solar panels.

PROJECTS

Nurse Robot (engineering final year project): *From 08/2024 to 05/2025*

- Developed a nurse assistance robot to handle routine tasks, enhancing workflow efficiency.
- Flutter application with Node.js as the backend for user login, task scheduling, as well as real-time robot monitoring and control using Robot Operating System (ROS) integrated with the Flutter app.
- Develop a linear quadratic regulator to control the robot's nonlinear states.

*→ Recipient of AUB's **Dean's Creative Achievement Award** for outstanding innovation in engineering.*

*→ 2nd Place **Winner at IEEE iCORE** - FYP Demo Day Competition 2025 hosted by the Lebanese American University of Beirut.*

Steer By Wire: *52h*

- Designed multiple controllers (PID, lag-lead, lead) for the Steer by Wire system using Quanser, MATLAB, and Simulink.

Human Posture Corrector Sensor: *32h*

- Designed a wearable posture correction device using Arduino and sensors.

Digital Twins Localization for XR Systems: *40h*

- Collaborated on a research project (DIDYMOS-XR, funded by EU) to integrate digital twins into extended reality (XR) systems.

Control a quadrotor helicopter: *30h*

- Modeled a quadcopter's nonlinear dynamics in Simulink and compared the performance of feedback linearization and adaptive sliding mode control.

EXTRACULLICULAR ACTIVITIES

Volunteer, IEEE R8 SYP Congress — **Grenoble, France**

From 06/2024 to 07/2024

- Promoted smooth interaction and engagement for 300+ participants.
- Managed event communications and facilitated social activities.

Cabinet Member, AUB Robotics Club — **Beirut, Lebanon**

From 08/2024 to 06/2025

- Organizing events related to robotics and control systems: engineering design challenge, build-it weekend, Arduino and Raspberry Pi workshops.