

Mustafa Hijazi

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Beirut, Lebanon

Education

American University of Beirut - **Beirut, Lebanon**

August 2022 - May 2026 (Expected)

Bachelor of Engineering (BE) in Mechanical Engineering

Experience

Mechanical Engineering Intern - Alef Group - Sharjah, UAE

June 2025 - August 2025

- Reviewed HVAC, drainage, fire protection, natural gas, and water layouts for multiple construction projects
- Assisting the design team with AutoCAD sketches
- Site visits to see real-life applications and prepare site reports

Projects

Dog Robot Locomotion in Complex Environments

February 2025 - April 2025

- Worked with a team guided by Prof. Hussein Hussein to improve the locomotion capabilities of the Unitree Go1 dog robot in complex, unstructured environments
- Tested High-level command, then moved on to Low-level command
- Adjusted gain and angle values to reach a satisfactory movement pattern
- Managed to move the robot forward and right using Low-level commands

Bicycle-Based Power Generator - Mechanical Design I Course

December 2024

- Designed a stationary pedaling machine that generates electrical power and stores it in a battery
- Designed and simulated the machine on SolidWorks
- Built a physical prototype from spare bicycle parts and ended with successful results

Walking Mechanism - Mechanics of Machines Course

May 2024

- Created a walking mechanism using the Chebyshev Lambda Linkage design
- Used SolidWorks to design, simulate, and print all the parts, including joints and pins

Rotating Solar Panel - Process Instrumentation Course

May 2024

- Helped design a photovoltaic panel that rotates with sunlight to maximize power generation
- Designed and simulated the circuit using Tinkercad
- Used an Arduino board to code and establish a relationship between LDRs and the rotating motor
- Achieved positive results after numerous trials

Extracurricular Activities

Consultant Associate - 180 Degrees Consulting AUB - **Beirut, Lebanon**

September 2022 - January 2023

- Worked with Loyac Lebanon on fundraising strategies
- Researched and analyzed successful NGOs such as Ajialouna in the local region
- Provided solutions to increase exposure by drastically growing social media presence and establishing a dedicated donation website

Model United Nations - **Dubai, UAE**

May 2022

- Represented Ireland in the UNICEF committee
- Discussed the issue of child refugee education
- Won “Best Research Award”

Charity - Badri NGO - **Saida, Lebanon**

September 2024 - October 2024

- Helped organize and prepare food for distribution
- Distributed food to displaced people due to war

Skills

- Fluent in English and Arabic, both written and spoken
- Computer-aided design software, notably Solidworks, AutoCAD, Creo Parametric, and Ansys Fluent
- MATLAB
- Microsoft Office