

Ghina Elsharif

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Robotics engineer

Mechanical Engineer with practical experience in laboratory safety operations, manufacturing processes, and equipment maintenance. Proven track record in workplace safety compliance through hands-on electrical systems management and infrastructure improvements. Strong foundation in engineering analysis, technical documentation, and industrial equipment protocols. Proficient in Microsoft Office suite and CAD software for safety documentation and facility layouts. Known for reliability, ethical work practices, and eagerness to learn industrial safety standards and regulations in manufacturing environments.

EDUCATION

Bachelor of Engineering in Mechanical Engineering American University of Beirut • GPA: 3.77/4 08/2020 - 02/2025

Relevant Coursework: Thermodynamics, Materials Science, Fluid Mechanics, Engineering Analysis, Manufacturing Processes

WORK EXPERIENCE

American University of Beirut 01/2022 - 12/2023

Laboratory Staff Assistant

- Restored critical laboratory equipment and enhanced safety infrastructure, successfully repairing non-functional equipment and installing proper electrical grounding terminals to ensure student and equipment safety compliance
- Conducted technical hardware diagnostics and repair coordination, performing on-site system analysis and troubleshooting to minimize laboratory downtime and maintain operational efficiency
- Managed comprehensive software licensing and laboratory operations across multiple engineering labs, ensuring compliance and optimal resource allocation
- Delivered hands-on technical support during experimental procedures, troubleshooting equipment issues and providing guidance on laboratory protocols to ensure safe project completion
- Maintained laboratory infrastructure and workflow optimization, contributing to enhanced safety environment for undergraduate and graduate research

American University of Beirut 01/2022 - 12/2023

Research Assistant (Materials Processing) with Prof. Mohamed Harb

- Pioneered operation of novel first-generation PLA filament extrusion equipment, establishing operational protocols and safety procedures for cutting-edge materials processing technology
- Optimized recyclable PLA filament production parameters through systematic experimentation, achieving reliable processing at 220°C extrusion temperature while maintaining safe operating conditions
- Developed standardized laboratory protocols for equipment operation, including heating/cooling cycles, cleaning procedures, emergency shutdown, and troubleshooting methods
- Conducted materials characterization using Universal Testing Machine (UTM), Scanning Electron Microscopy (SEM), and Thermogravimetric Analysis (TGA) following proper safety and handling procedures
- Provided strategic research recommendations on material integration, establishing technical foundation for composite material development projects

Global Education Internship Program 06/2024 - 08/2024

STEM Curriculum Developer

- Developed comprehensive robotics curriculum comprising 12 experiment manuals for grades 2-12, creating educational resources aligned with international safety and educational standards
- Conducted professional development training for teachers on robotics concepts and equipment operation, emphasizing safe handling procedures and classroom safety protocols
- Demonstrated exceptional initiative and innovation in educational technology development, earning recognition for dedication and professionalism
- Collaborated with international experts to create innovative educational solutions while maintaining focus on student safety and age-appropriate equipment usage

PROJECTS

Adjustable Solar Panel Holder

- Engineered adaptive solar energy system capable of withstanding extreme environmental loading conditions
- Conducted comprehensive engineering analysis including static structural FEA, safety factor calculations, kinematic motion studies, and fatigue life assessment using SolidWorks Simulation
- Optimized design through iterative refinement, achieving improved structural durability and producing manufacturing ready technical drawings following industry standards

Wireless Medical Watch

- Designed innovative wearable medical device featuring integrated medicine storage, addressing user safety and medication adherence
- Executed comprehensive structural analysis with multiple load cases, material optimization, and boundary condition modeling to ensure device durability and user safety
- Developed IoT-enabled monitoring system with focus on reliable operation and user safety protocols

Fluid Systems Design Project

- Designed and manufactured autonomous watercraft using integrated SolidWorks design and ANSYS Fluent hydrodynamic optimization
- Developed embedded control systems with emphasis on safe operation and emergency protocols
- Programmed control architecture optimizing energy efficiency and safe handling characteristics

VOLUNTEERING & LEADERSHIP

AllGirlsCode

05/2024 - 05/2025

Director of Logistics

- Led strategic organizational operations for 50-member STEM organization, managing cross-functional teams and ensuring safe event execution
- Orchestrated large-scale technical events including Techsplore 2024, impacting 280+ young women through comprehensive logistics management and venue safety coordination
- Directed recruitment and mentorship programs fostering next-generation leaders in STEM fields

Paper Airplanes, Inc.

08/2023 - 03/2024

English Language Tutor

- Provided specialized educational support to crisis-affected student, delivering personalized instruction through consistent weekly sessions
- Contributed 30+ volunteer hours demonstrating reliability, dedication, and commitment to student success

SKILLS

Design & Documentation: SolidWorks, AutoCAD, Fusion 360, ANSYS Workbench, Creo

Microsoft Office: Word, Excel, PowerPoint, Outlook (Advanced proficiency)

Analysis & Testing: Universal Testing Machine (UTM), Scanning Electron Microscopy (SEM), Thermogravimetric Analysis (TGA)

Manufacturing: 3D Printing, Materials Characterization, Equipment Operation and Maintenance

Engineering Analysis: FEA, Static Structural Analysis, Kinematic Studies, Fatigue Analysis

Languages: Arabic (Native), English (Advanced)

AWARDS & SCHOLARSHIPS

12-week Career Guidance Training

09/2025

Abdulla Al Ghurair Foundation and DOT Lebanon

Member of the Year Award - AllGirlsCode

01/2024

International Scholarship - Qatar Education Above All

09/2022

(EAA) Full Scholarship Recipient - USAID

08/2020