

# Sanad Madi

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## EDUCATION

New York University, Bachelor of Science, Mechanical Engineering (GPA: 3.915)

May 2027

## TECHNICAL SKILLS

SolidWorks	Energy & PV Engineering	Geometric Dimensioning and Tolerancing
Mechanical Diagnostics & Repair	LTspice	Report writing, and presenting
3D Printing	Python	Technical Communication
Mechanical Testing & Characterization	MATLAB	Cobot Programming
Material Preparation & Processing	Simulink	Kinematics & Motion Planning

## EXPERIENCE

### Mechanical Technician Intern – Harley-Davidson, Amman, Jordan

Jul 2024 - Aug 2024

A four-week internship at Harley-Davidson focused on technician skills, offering hands-on experience in motorcycle design, assembly, and maintenance, along with diagnostic and repair techniques.

- Gained insight into how mechanical parts function and operate simultaneously
- Developed a comprehensive understanding of technician roles and the work environment, while gaining knowledge of the various types of Harley-Davidson motorcycles.

### Renewable Energy Engineer – Taqa Power, Cairo, Egypt

Jun 2025 - Aug 2025

A summer internship focused on renewable energy and solar power systems, providing hands-on exposure to photovoltaic design and sustainability practices.

- Applied PVsyst and SketchUp to model solar energy systems, conduct yield simulations, and visualize layouts for performance optimization
- Collaborated with the **investment team** to integrate technical analysis with financial evaluations, contributing to well-rounded decision-making for a future energy project.
- Gained insight into the workflows of large-scale energy operations, emphasizing the intersection of engineering, sustainability, and business strategy.

### Mechanical Technician Intern – Bosch, Amman, Jordan

Jun 2022 - Aug 2022

A summer internship position focused on automobile repair, encompassing the acquisition of skills in diagnosing vehicle issues and determining the most suitable and efficient methods to address them.

- Managed customer communication and independently carried out assigned repair tasks, demonstrating initiative and reliability
- Developed technical skills in diagnosing vehicle parts, troubleshooting issues, and deepening understanding of mechanical systems and their functions.

### Robot Operations & Lab Intern– NYU Abu Dhabi, Abu Dhabi, UAE

Sep 2025 - Present

Collaborate with Dr. Merritt Moore in research merging robotics and art, programming and operating UR-series robotic arms for precise, synchronized motion with human performers.

- Programmed and operated Universal Robots (UR series) to execute coordinated movements alongside human performers across dance, choreography, and musical projects, integrating artistic expression with robotic precision.
- Developed control algorithms and motion sequences through rigorous calibration and synchronization testing to optimize system responsiveness.
- Contributed to performance-based demonstrations merging robotics, creativity, and technical engineering.
- Engineered a miniature encoder-based robot to capture and map manual motion data for large-scale robotic choreography.

### Undergraduate Research Assistant – Center for Smart Engineering Materials, NYU Abu Dhabi, Abu Dhabi, UAE

Oct 2024 - Jun 2025

Contributed to a research project focused on developing sustainable, green methods for potable water production using healing crystals in desalination membranes. The work integrates mechanical engineering and chemistry to enhance water purification processes.

- Conducted literature reviews and prepared membrane and crystal materials, gaining hands-on laboratory experience to inform project direction..
- Performed mechanical testing to evaluate material suitability for water desalination applications.
- Assisted in the design of water membranes and the development and mechanical testing of smart crystals to enhance purification performance.

### Undergraduate Research Assistant – Structural 3D Printing Lab, NYU Abu Dhabi, Abu Dhabi, UAE

Jun 2025 - Oct 2025

Research focused on developing and enhancing sustainable metallic composites through advanced 3D printing methods, supported by an extensive literature review and experimental investigation.

- Operated and prepared green metal samples using 3D metal printers in various forms and geometries.
- Conducted mechanical testing and specimen characterization to evaluate performance and reliability.
- Studied and optimized the processes of debinding and sintering to improve the mechanical properties and overall quality of printed metals.

### Weyak Leader – First-Year Experience Committee, NYU Abu Dhabi, Abu Dhabi, UAE

Aug 2024 - Dec 2024

Served as a mentor for incoming first-year students, helping them transition smoothly into college life by providing guidance, support, and opportunities for connection. Developed strong organizational, leadership, and communication skills while fostering a sense of community among students.

- Supported 14 mentees with guidance on academic, social, and personal challenges, fostering a smooth transition to college life.
- Organized orientation week activities, including icebreakers and campus events, fostering community connections.
- Led monthly discussions and events on conflict resolution, identity, and belonging to promote student growth and inclusivity.

## ACTIVITIES

JawFit e-commerce store owner

Organizer and developer of Watenyeh Lal Kheer Charity