Yazan Alzyuod

Mechanical Engineer | Robotic Systems (Mechanical Design), CAD/CAE & System Integration
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Innovative Mechanical Engineer with strong expertise in **robotics, unmanned ground vehicles (UGVs), and mechanical system design**. Proven experience delivering **award-winning, nationally recognized engineering projects** involving terrain-adaptive mechanisms, structural optimization, and multidisciplinary system integration. Adept at applying **engineering analysis, CAD/CAE tools, and strategic problem-solving** to develop reliable solutions for complex real-world environments. Recognized for leadership, adaptability, and a strong drive for continuous professional growth.

Key Achievements

- **National Recognition:** Selected and funded by KAFD and JODDB as one of the top graduation projects in Jordan (2025) for an award-winning UGV.
- **Robotics Engineering Achievement:** Designed terrain-adaptive UGV platforms using optimized mechanical design and system integration.

Education

The Hashemite University | Zarqa, Jordan — Oct 2020 – Sep 2025
Bachelor's Degree in Mechanical Engineering

Aspire Institute (HarvardX-Supported) — Mar 2024 – May 2025

- **Leadership Development:** Completed advanced coursework led by Harvard University faculty focusing on leadership communication and influence.
- **Strategic Thinking:** Applied structured decision-making frameworks to technical and organizational problem-solving scenarios.
- **Professional Growth:** Strengthened analytical reasoning and planning capabilities aligned with high-impact engineering environments.

Engineering Projects & Professional Experience

Project RAHAL – Multi-Terrain Unmanned Ground Vehicle (UGV)
Mechanical Design Engineer

- **Mobility Design:** Developed a terrain-adaptive UGV using a Rocker-Bogie suspension system to ensure stability on uneven and hazardous terrain.
- **Structural Design:** Engineered a durable chassis optimized for load distribution and reliable performance in demanding operating conditions.
- **Modular Architecture:** Designed a flexible mechanical platform supporting reconnaissance, search and rescue, and autonomous mission payloads.

Project Mustakshif – Unmanned Ground Vehicle (Nationally Awarded Project)
Mechanical Design & Integration Engineer

- **Chassis Development:** Designed a lightweight chassis with a trailing-arm suspension system optimized using finite element analysis (FEA).
- **Structural Optimization:** Improved strength-to-weight ratio through simulation-driven design under dynamic loading conditions.
- **System Integration:** Integrated mechanical and electronic subsystems to deliver a versatile UGV for agricultural and reconnaissance applications, earning national recognition.

Recognition & Funding

- **Research & Innovation Excellence:** Selected and funded by the King Abdullah II Fund for Development (KAFD) in partnership with the Jordan Design and Development Bureau (JODDB).
- **National Ranking:** Recognized as one of the top graduation engineering projects in Jordan under the Research and Innovation Support Program – 2025.

Certifications & Training

- **Mobile RobotiX** – HTUx | Mar 2025
- **Unmanned Aerial Vehicles (UAV)** – HTUx | Mar 2025
- **Unmanned Ground Vehicles (UGV)** – HTUx | Feb 2025
- **Control Systems** – HTUx | Feb 2025
- **Sensors & Actuators** – HTUx | Jan 2025
- **ANSYS Mechanical** – MechXpert | Sep 2024
- **ANSYS Fluent** – MechXpert | Sep 2024
- **System Modeling** – HTUx | Jul 2024
- **Revit MEP** – The Hope | Dec 2023

Core Skills

Mechanical & Robotics Engineering

- Robotic System Architecture for Unmanned Platforms
- Mobility Mechanisms & Suspension Design
- Mechanical Stability & Terrain Interaction
- Modular Mechanical Interfaces & Payload Mounting

CAD, CAE & Simulation

- Parametric 3D CAD Modeling
- Finite Element Analysis (FEA)
- Structural & Thermal Simulation
- ANSYS Mechanical, Fluent & Abaqus

Systems Integration & Control

- Electromechanical Subsystem Integration
- Control System Fundamentals
- Sensors & Actuators Implementation
- Arduino-Based Prototyping, MATLAB (Fundamentals)

Product Development & Engineering Analysis

- Engineering Design Processes
- Design Optimization & Failure Analysis
- Prototype Assembly & Functional Testing
- Engineering Documentation & Technical Drawings

HVAC & Building Services

- HVAC Load Calculations (HAP)
- Revit MEP Modeling
- Mechanical Building Systems Design
- Energy Performance Evaluation

Professional Capabilities

- Technical Team Collaboration
- Structured Engineering Problem Solving
- Analytical & Systems Thinking
- Project Planning & Task Prioritization

Languages

Arabic (Native), English (Professional Working Proficiency).