

Mohamed Abd El Hameed Hassona

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Professional Summary

Motivated mechatronics and design engineering student with hands-on experience in real-world projects, youth teaching and mentoring. Proficient in mechanical analysis, CAD design, material selection, and creative problem solving. Backed by strong soft skills, including critical thinking, effective communication, time management, and a dedicated work ethic. .

Education

University of EJUST , mechatronics (undergrad)

Sept 2020/2021 – May
2025/2026

- GPA: 3.3/4.0
- **Coursework:** Theory of Machines, Strength of Materials, Mechanical design

Experience

EVER competition, chassis member

- Designed the vehicle chassis structure using SolidWorks, focusing on structural strength, weight optimization, and manufacturability
- Collaborated with team members to integrate key subsystems, including steering and suspension
- Operated drilling and bending machines to manufacture custom components
- Generated precise DXF files for fabrication processes
- Actively participated in the final assembly and installation of the vehicle

Shell eco-marathon, head mechanical

- Designed the vehicle chassis structure using SolidWorks, focusing on structural strength, weight optimization, and manufacturability
- Contributed to the design of other systems, including suspension and brakes
- assisted in material selection for optimal performance and durability

Robotics Club - ROV competition, float member

- Designed the float subsystem structure using SolidWorks, emphasizing structural integrity, weight optimization, manufacturability, and underwater isolation under water
- Assisted in the installation and assembly of the float and ROV
- Contributed to selecting appropriate materials for both manufacturing and waterproof isolation

Projects

Mobile Robot with Manipulator - team head

- Designed the mobile robot base and articulated manipulator using SolidWorks
- Selected suitable motors for both the robot's locomotion and the manipulator's joints based on torque and speed requirements
- Exported STEP files and processed 3D models using Ultimaker Cura 3.5 for 3D printing
- Assembled and integrated the entire system, both mechanically and electrically

Graduation Project – 5-DOF Industrial Robotic Arm (In Progress) "

- Designed and assembled robotic links and joints using CAD tools
- Modeled the system's forward and inverse kinematics for accurate control and motion planning
- Selected suitable materials for structural components and appropriate motors for each joint based on load and performance requirements