

# SULAIMAN AL-SHABEBI

## MECHATRONICS ENGINEERING

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### Objective

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Entry-level Mechatronics engineer targeting automation/PLC roles. Applies skills in CAD (SolidWorks), control systems, and process optimization; comfortable with on-site testing and rapid iterations.

### PROJECTS & EXPERIENCE

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#### Capstone – Multi-purpose Hexapod Robot:

- Mechanical design in SolidWorks; assemblies; basic motion/interference checks.
- Actuator & sensor selection and sizing; controller integration (Raspberry Pi).
- Prototype build and terrain testing; iterated to improve stability and traction.
- Documentation and technical presentations.

#### Site & Industrial Exposure:

- Hizzyaz Power Generation Station: observed generation/distribution fundamentals, protection systems, and site safety practices.
- Amran Cement Plant: observed heavy production lines, motors & control systems, and material handling.

#### Applied Mini-Projects:

- Arduino: sensor reading, motor control, serial communication; rapid prototyping.
- PLC: basic Ladder logic for start/stop circuits; I/O mapping; simple interlocks.
- LabVIEW: data acquisition and monitoring dashboards.
- MATLAB: preliminary control simulations and data analysis.

## Education

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B.Eng. Mechatronics Engineering, Arab Academics University.	2025
English Diploma LPM Institute.	2019
High school graduate with a GPA of (86.25 ) in the science stream.	2020

## Skills & abilities

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- **SolidWorks:** 3D CAD modeling, assemblies, basic motion/interference checks, and manufacturing drawings.
- **Raspberry Pi :** embedded Linux setup; GPIO/PWM control; sensor/actuator integration for the hexapod robot.
- **MATLAB:** Data analysis and basic control simulations for rapid algorithm prototyping.
- **Arduino:** Microcontroller programming, sensor/actuator integration, serial communications, and rapid prototyping.
- **PLC:** Intro Ladder logic, I/O mapping, and integration of industrial sensors/actuators.
- **LabVIEW:** Simple VIs for data acquisition, monitoring, and basic test automation.
- **Microsoft Office:** Word (reports), PowerPoint (presentations), Excel (data organization/basic analysis).
- **System Design & Integration:** Translate requirements into mech/elec designs for a hexapod robot; select actuators/sensors; consider preliminary loads and kinematics.
- **Prototyping & Testing:** Build prototypes and conduct field trials on rough terrain; iterate based on test results.
- **Industrial Exposure:** Site visits to **Hizyaz Power Station** and **Amran Cement Plant** observing processes, control systems, and safety practices.
- **Documentation & Presentation:** Produce clear technical reports and modern, visually coherent slide decks.
- **Teamwork & Knowledge Sharing:** Collaborate in project teams and provide peer training/mentoring.
- **Time Management:** Plan tasks and meet academic project deadlines.
- **Language & Communication:** English (beginner diploma) , Arabic is the mother tongue
- **Safety Awareness:** Apply safety rules and procedures in industrial environments.