

JOB DESCRIPTION

Job Title: Senior R&D Mechatronics Engineer

Reporting line: R&D Team Leader

1. Job Purpose:

A Senior R&D Mechatronics Engineer plays a crucial role in contributing to the leading of research and development for new projects and improving existing projects across different sectors within the company. They work closely with cross-functional teams to design, optimize, and implement cutting-edge mechatronic systems and technologies that deliver the highest efficiency and performance. They also provide supervision, guidance and support to engineers to ensure project requirements and standards are met.

2. Duties and Responsibilities:

- Leading the integration of mechanical, electrical, and software components to create complex mechatronic systems.
- Developing sophisticated designs that seamlessly merge mechanical and electronic elements.
- Designing control algorithms and systems to regulate the behaviour of mechatronic devices.
- Overseeing the construction of prototypes and conducting thorough testing to validate and optimize system performance.
- Maintaining precise records and ensuring compliance with industry-specific quality, safety, and regulatory standards.
- Collaborating closely with multidisciplinary teams, including mechanical and electrical engineers, software developers, and other specialists.
- Staying current with emerging technologies and trends in mechatronics to drive continuous improvement and innovation.
- Providing mentorship and guidance to junior engineers, fostering their professional growth.
- Ensuring that mechatronic systems meet stringent quality, safety, and regulatory requirements.

• Job Specification:

- Experience Needed: 2 – 5 Year
- Bachelor or Master's degree in Mechatronics Engineering.
- Strong understanding of mechatronics principles and concepts.

- Experienced in testing and evaluation of mechatronic systems.
- Experience with motion control systems, including motors, gears, bearings, sensors, actuators, and driver
- Experienced in electrical design and simulation software, such as Proteus, Multisim, Eagle, and Altium.
- Experienced in CAD software, such as SolidWorks and Autodesk.
- Experienced in mechanical analysis such as FEA (Static, Dynamic)
- Experienced in MATLAB, Simulink, and LabVIEW.
- Experienced in programming languages, such as C, C++, and Python.
- Experienced in industrial PLC programming and modules.
- Experienced in industrial communication protocols.
- Experienced in Robot Operating System (ROS1 and ROS2).
- Experienced in SLAM concepts.
- Experienced in motion planning and programming for robotic arms.
- Experienced in Embedded Systems and RTOS.
- Experienced in machining processes, such as laser cutting, bending, 3D printing, lathing, milling, rolling, welding.
- Experienced in project management frameworks.
- Experienced in version control.
- Excellent command of English (spoken and written) is a must.
- Excellent knowledge of technical writing skills.
- Experienced in Microsoft Office, such as Word, Excel, and PowerPoint.