Job Description: Electric Vehicle (EV) Prototype Shop Engineer

Position: Electric Vehicle (EV) Prototype Shop Engineer

Location: Kalol GIDC, Near Gandhinagar, Ahmedabad, Gujarat.

Department: Vehicle Engineering

Reports To: Prototype Shop Manager

Job Type: Full-Time

Job Overview:

We are looking for a highly skilled and hands-on **Electric Vehicle (EV) Prototype Shop Engineer** to join our innovative team. In this role, you will be responsible for building, testing, and refining prototypes of electric vehicles (EVs) and their components. You will work closely with engineering teams to bring design concepts to life, support the development of new EV technologies, and ensure that prototypes meet all performance, safety, and quality standards. The ideal candidate will have a background in automotive engineering, strong technical skills, and a passion for electric vehicle innovation.

Key Responsibilities:

1. **Prototype Build and Assembly:**
    - Build and assemble EV prototypes from initial concepts, including mechanical, electrical, and battery components.
    - Work with engineering teams to interpret CAD designs and convert them into physical prototypes, including the integration of powertrains, batteries, control systems, and structural components.
    - Fabricate and modify parts, systems, and assemblies using tools such as CNC machines, lathes, milling machines, and 3D printers.
    - Ensure proper installation and alignment of components, including electric motors, battery packs, wiring, and thermal systems.
2. **Testing and Validation:**
    - Conduct hands-on testing of prototype vehicles, including mechanical, electrical, and system-level tests (e.g., performance, range, thermal management).
    - Troubleshoot issues during testing, providing engineering feedback to improve prototype performance and reliability.
    - Collaborate with cross-functional teams to identify and resolve design or manufacturing issues based on test results.
    - Support vehicle validation tests such as range testing, durability testing, crash simulations, and track testing.

3. **Collaboration with Design & Engineering Teams:**
    - Collaborate with design engineers to understand prototype requirements, design intent, and testing goals.
    - Work closely with electrical and mechanical engineers to ensure proper integration of electrical systems, powertrain, thermal management, and other vehicle subsystems.
    - Provide feedback to the design team on manufacturability, part tolerances, and design improvements based on real-world assembly and testing experiences.
4. **Prototype Shop Operations & Maintenance:**
    - Maintain the prototype shop in a safe and efficient condition, including equipment, tools, and workspaces.
    - Ensure that all work is completed in compliance with health, safety, and environmental standards.
    - Assist in maintaining an organized inventory of parts, tools, and materials, ensuring that the shop is adequately stocked for ongoing projects.
    - Ensure proper calibration and maintenance of testing equipment and machinery.
5. **Prototyping Innovation and Continuous Improvement:**
    - Support the exploration and implementation of new prototyping techniques, materials, and manufacturing processes.
    - Continuously look for ways to improve the efficiency, quality, and safety of prototype builds and testing procedures.
    - Assist in the development of scalable, cost-effective solutions for high-volume production based on prototyping insights.

Required Qualifications:

- **Education:**
    - Bachelor's degree in mechanical engineering, Automotive Engineering, Electrical Engineering, or a related field. Equivalent technical certifications or hands-on experience in automotive prototyping will also be considered.
- **Experience:**
    - 3+ years of experience in automotive prototype development or a similar field, with hands-on experience in building, testing, and refining mechanical and electrical systems for electric vehicles.
    - Proven experience in prototype assembly, troubleshooting, and testing of EV systems (powertrain, battery packs, thermal systems, etc.).
    - Familiarity with the processes of automotive prototyping, including CAD-to-manufacturing workflows, assembly, and integration of EV components.