Job title: Mechanical Engineer

**About the job**

**About Us**

Freedom Gateway is an innovative technology company specializing in advanced hardware solutions for secure and efficient transaction processing systems. We create reliable, high-performance products that integrate seamlessly with electronic and software components.

**Job Summary**

We are seeking a talented Mechanical Engineer to join our hardware development team. In this role, you will be responsible for designing, prototyping, and optimizing mechanical systems for automated dispensing mechanisms used in high-reliability applications. The ideal candidate will have a strong background in precision engineering, material handling, and integration of mechanical components with sensors and actuators. This position offers the opportunity to work on challenging projects that require innovative problem-solving and attention to detail.

**Key Responsibilities**

* Design and develop mechanical components and assemblies for automated systems, focusing on precision movement, durability, and efficiency.
* Conduct feasibility studies, simulations, and analyses (e.g., FEA, kinematic modeling) to ensure designs meet performance, reliability, and safety standards.
* Collaborate with electrical engineers, software developers, and product managers to integrate mechanical systems with electronic controls and user interfaces.
* Prototype, test, and iterate on designs using CAD software, 3D printing, and machining tools.
* Select appropriate materials, tolerances, and manufacturing processes to optimize cost, quality, and scalability.
* Perform failure mode analysis, root cause investigations, and implement design improvements for enhanced product longevity.
* Ensure compliance with industry standards, regulatory requirements, and best practices in mechanical design.
* Document designs, specifications, and test results thoroughly to support manufacturing and quality assurance processes.
* Stay current with emerging technologies in mechanical engineering, automation, and related fields.

**Qualifications**

* Bachelor's or Master's degree in Mechanical Engineering or a related field.
* Experience in mechanical design, preferably in precision automation, robotics, or electromechanical systems.
* Proficiency in CAD software (e.g., SolidWorks, AutoCAD, or similar) and simulation tools (e.g., ANSYS, MATLAB).
* Strong understanding of mechanisms, kinematics, dynamics, and materials science.
* Experience with prototyping techniques, including 3D printing, CNC machining, and injection molding.
* Familiarity with sensor integration, actuators, and control systems.
* Experience with sheet metal design and fabrication techniques, including bending, stamping, and welding for durable enclosures and structural components.
* Proficiency in designing and integrating mechanical drive systems, including gears, belts, pulleys, and solenoids for precise motion control.
* Hands-on experience with motor integration, such as stepper motors, DC motors, and servo motors, including selection, sizing, and interfacing with control electronics.
* Excellent problem-solving skills, with the ability to analyze complex systems and propose practical solutions.
* Strong communication skills for cross-functional collaboration and technical documentation.
* Ability to work independently and in a team-oriented environment.

**Preferred Skills**

* Experience in high-volume manufacturing and design for manufacturability (DFM).
* Knowledge of thermal management, vibration analysis, and environmental testing.
* Background in industries such as fintech, vending, or secure hardware systems.
* Certification in relevant engineering standards (e.g., ASME, ISO).

Salary range: $75,000-$95,000

If you are a detail-oriented engineer passionate about creating robust mechanical solutions for real-world applications, we encourage you to apply.