1. Sensor Network:	2. Data Acquisition System:	3. Data Analysis and Processing:	4. Dashboard Interface:	5. Alerting System:	6. Historical Data Analysis:
Deploy various sensors such as accelerometers, strain gauges, and temperature sensors along the metro rail network.	Data from the sensors is collected using a centralized data acquisition system installed at strategic points along the metro rail network.	Advanced algorithms analyze the collected data to detect anomalies, structural weaknesses, or potential issues.	A user-friendly dashboard provides a visual representation of the metro rail network. Identified issues and corresponding locations are displayed on the dashboard map.	An alerting system notifies maintenance personnel or authorities in real-time when critical issues are detected.	Historical data is stored for trend analysis, performance evaluation, and predictive maintenance planning.
These sensors collect real-time data on structural behavior, vibrations, temperature changes, etc.	This system aggregates, processes, and stores the collected data securely.	Machine learning techniques can be employed to predict future maintenance needs based on historical data.	Components such as tracks, tunnels, bridges, etc., are highlighted to indicate the affected areas.	Alerts can be sent via email, SMS, or integrated directly into existing maintenance management systems.	Reports and analytics tools provide insights into the overall health of the metro rail network over time.