VISUAL INSPECTION



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AI-POWERED AUTOMATED INSPECTION GATE FOR URBAN FLEET ASSETS

Visual Inspection is an advanced AI-powered inspection gate designed to automate the condition assessment of urban fleet vehicles, including trams, buses, and trolleybuses, with unmatched speed, precision, and reliability. Built for demanding operational environments, the system combines high-resolution imaging, state-of-the-art computer vision, and real-time analytics to deliver comprehensive asset inspections without disrupting operations.

As vehicles pass through the inspection gate, a network of synchronized high-resolution cameras captures detailed imagery from multiple viewpoints. AI algorithms automatically detect defects, anomalies, wear patterns, and maintenance-critical issues, enabling operators to improve safety, reduce downtime, and optimize maintenance planning.

KEY FEATURES

- **Fully Automated Inspection –** Continuous, non-intrusive inspections during normal fleet operations.
- **High-Resolution Imaging –** Captures fine details for accurate defect detection and condition assessment.
- **AI-Powered Analytics –** Advanced computer vision models identify defects and generate actionable insights.
- **Industrial-Grade Reliability –** Designed for 24/7 operation in harsh urban transport environments.
- **Real-Time Results –** Immediate access to inspection findings, alerts, and historical trends.
- **Scalable Architecture –** Easily integrates with existing maintenance and fleet management systems.

BENEFITS

- Increased operational safety
- Reduced manual inspection effort
- Faster maintenance decision-making
- Improved asset availability
- Lower lifecycle maintenance costs
- Consistent and objective inspection results

Visual Inspection transforms urban fleet maintenance from periodic manual checks into a data-driven, predictive process, helping operators maximize fleet reliability while minimizing operational disruptions.

INSPECTION CAPABILITIES

BOGIE INSPECTION

Comprehensive inspection of chassis, wheel assemblies, suspension components, braking systems, and underbody structures to identify wear, damage, missing parts, and safety-critical defects.

BODY INSPECTION

Automated assessment of the vehicle exterior, including panels, doors, windows, markings, and structural elements. Detects dents, cracks, corrosion, graffiti, and other surface anomalies.

ROOF INSPECTION

High-resolution monitoring of rooftop equipment and structures, enabling early detection of damage, contamination, loose components, and maintenance issues that are difficult to inspect manually.

PANTOGRAPH INSPECTION

Dedicated inspection of pantograph assemblies, including contact strips, arms, joints, and mounting structures. AI-driven analysis identifies wear, deformation, and operational defects that can impact power collection performance.



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