Use Case Overview:

Accurate condition assessment and efficient maintenance processes are pivotal for ensuring reliable operations and minimizing resource requirements. However, challenges such as an aging workforce, product variety, complex systems, and regulatory requirements pose obstacles to traditional inspection methods, particularly for safety-critical assets.

Partial automation and worker assistance present an opportunity to revolutionize inspection and maintenance. AI-based systems have the potential to achieve accuracies comparable to or surpassing expert workers, significantly improving speed, traceability, and enabling 24/7 operations.

Maintenance, repair, and overhaul are critical for reliable and economical operations, and these processes can be transformed with intelligent automation and worker assistance.

Challenges:

1- Aging Workforce and Skill Variability:

The workforce's aging demographic and variations in skills pose challenges in maintaining consistent and accurate inspection standards.

2- Product Variety and Complex Systems:

The diversity of products and the complexity of systems demand adaptive inspection approaches, making it challenging to standardize procedures.

3- Regulatory Compliance:

Meeting regulatory requirements for safety-critical assets requires meticulous inspection and documentation, adding complexity to the maintenance processes.

Solution:

Our comprehensive solution includes:

1- Digital Workstations for Assisted Maintenance:
Providing digital workstations that assist maintenance personnel in efficiently carrying out tasks, ensuring accuracy and compliance.

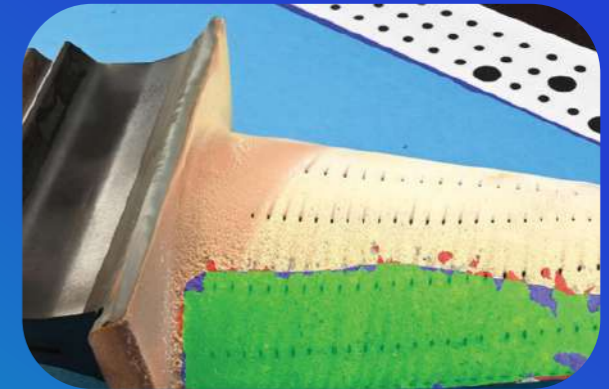**2- Handheld Inspection & Web Apps for Tablets:**
Offering handheld inspection tools and web applications for tablets, facilitating convenient and mobile inspection processes.

3- Camera Gates for Train Maintenance:
Implementing camera gates for train maintenance, utilizing advanced imaging technology for precise inspection of critical components.

4- AI-Based Inspection Solutions:
Developing reliable AI-based inspection solutions for inbound and outbound assessment, overhaul task descriptions, and adaptive worker support.

Objective evaluation	Codify expert knowledge	Worker Assistance	Traceability and Scalability

Key Features:

- Accurate Inbound Inspection:

Utilizing a sophisticated camera and sensor setup with custom-fitted lighting for accurate assessment during inbound inspection, even in challenging conditions.

- Image Understanding:

Employing advanced machine learning techniques and anomaly detection algorithms to assess captured images, providing valuable insights for seamless information flow.

- Assisted Overhaul:

Implementing adaptive worker assistance for complex overhaul tasks, offering diverse applications through visualization on screens, augmented reality devices, or directly on the part.

- Reliable Outbound Check:

Reevaluating the asset's condition before outbound, determining the completion of maintenance, and providing result documentation for process improvements and long-term quality assurance.

Your Benefits:

- Traceability and Scalability:

Achieving traceability and scalability through AI-based solutions, ensuring consistency and adaptability across diverse inspection scenarios.

- Codify Expert Knowledge:

Systematically capturing and applying expert knowledge through AI, reducing dependency on individual expertise and enhancing standardization.

- Worker Assistance:

Providing adaptive worker assistance to enhance efficiency, reduce errors, and ensure a smoother execution of maintenance tasks.

- Objective Evaluation:

Enabling objective evaluation through AI-based systems, contributing to unbiased and accurate assessments in the maintenance process.

Contact us

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