

Revolutionizing Technician Video Analysis with Video Language Model & Agentic AI

In today's rapidly evolving Energy and Utilities sector, organizations increasingly rely on advanced tools such as drones, helmet-mounted cameras, Land Rover devices, and other smart inspection technologies to support maintenance and field operations. Despite this technological adoption, nearly 70-80% of technician-recorded videos remain underutilized, with manual review processes leading to inefficiencies, missed insights, and increased risks including asset failures, safety hazards, and rising maintenance costs.

To address this challenge, Capgemini's Energy & Utilities Industry Platform has developed Opsgentix AI Assistance, a cutting-edge solution that revolutionizes technician video analysis. By harnessing the power of artificial intelligence, Opsgentix automates video review, reducing manual effort by up to 70% and unlocking actionable insights that enhance operational efficiency, safety, and business value.

Streamlined Process for Enhanced Efficiency

Opsgentix AI Assistance operates through a streamlined process designed to maximize efficiency and effectiveness. Technicians can either live-stream or upload their videos, while users can provide natural language prompts or select from prebuilt use-case options such as summarizing procedures, narrating repairs, fault analysis, and safety checks. The system then identifies the task and assigns it to relevant AI agents, ensuring that each video is analyzed comprehensively and accurately.

Multi-Agent System for Comprehensive Insights

The multi-agent system employed by Opsgentix AI Assistance is a key differentiator, delivering comprehensive insights through specialized AI agents.

- The Video Analyst systematically identifies essential technician activities and highlights potential concerns in real time, including matters related to repair, HSE, PPE compliance etc. This process ensures that all crucial moments are accurately analyzed while the maintenance engineer is operating in the field.
- The Summarizer transforms complex workflows into concise, digestible reports that highlight essential steps and outcomes of the maintenance and repair process.
- The Narrator produces natural-sounding voiceovers for process walkthroughs, enhancing the accessibility of technical content for video presentations. Additionally, it offers noise cancellation features to improve clarity when audio is unavailable.

- Diagnostics assistance offers real-time debugging support, enabling teams to promptly identify and address issues during operations for each action repair process in alignment with Standard Operating Procedures.
- The Video Merger stitches together outputs into a final video, and the Orchestrator coordinates agents and delivers unified actionable output.
- This multi-agent system ensures that every aspect of the technician's is utilized to its fullest potential, providing valuable insights that drive operational efficiency.

Addressing Operational Gaps with Precision

Opsgentix AI Assistance brings significant business value by addressing several critical operational gaps. Here are the key benefits:

1. **Reduced Review Effort:** By auto-analyzing technician videos using role-aware AI agents, Opsgentix cuts review effort, unleashing hidden insights that were previously overlooked.
2. **Faster Fault Detection:** The system detects tasks, faults, and SOP gaps instantly, leading to faster fault detection and issue escalation.
3. **Improved Compliance and Safety:** Flags safety or process breaches automatically, resulting in improvement in compliance and safety audits.
4. **Enhanced First-Time Fix Rates:** By guiding technicians with step-wise summaries and narrations, Opsgentix improves first-time fix rates and lowers repeat visits.

These capabilities collectively enhance operational efficiency and drive business value.

Conclusion

Opsgentix AI Assistance is revolutionizing technician video analysis by leveraging advanced AI technologies to auto-analyze videos, reduce review efforts, and uncover valuable insights. The system's streamlined process, multi-agent approach, and cutting-edge technologies collectively enhance operational efficiency and drive business value. By addressing critical operational gaps with precision, Opsgentix AI Assistance is paving the way for a more efficient and effective future in technician video analysis.