Adaptive Visual Inspection

AI based visual inspection for manufacturers

Summary

This mobile visual quality inspection solution is geared for production assembly lines. Using real-time data and image processing, this application uses an AI algorithm using machine learning to inspect quality of assembled parts in production. Quality data associated with images is sent to MindSphere and processed into a time series. A workflow and dashboard created with Mendix shows the most recent quality inspection result and offers the opportunity for line managers to correct problems. This allows for fewer problems with delivered parts, and less money lost on rework to fulfill quality requirements.

Benefits

- Increase quality outcomes of assembly line processes.
- Improve efficiency of visual inspection processes.
- Business logic is independent from physical devices.
- Business logic can be configured by business users, device specialists not needed.
- Usage of standards enables knowledge transfer across factory environments.

Features

- AI algorithm uses machine learning to check assembly of parts.
- Real-time processing of quality data.
- Alerts for quality personnel allow for manual inspection, problem detection or improved machine learning.
- Easy setup and rapid deployment for new quality workflows.

MindSphere is the cloud-based, open IoT operating system from Siemens that connects real things to the digital world, and enables powerful industry applications and digital services to drive business success. MindSphere’s open Platform as a Service (PaaS) enables a rich partner ecosystem to develop and deliver new applications.

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