Škoda Auto: "Magic Eye" camera system quickly identifies maintenance needs on the assembly line

› **AI-based system uses image analysis to detect deviations in the process**
› **"Magic Eye" developed and integrated by the Škoda FabLab on the Mladá Boleslav assembly line for the Enyaq iV and Octavia**
› **Planned implementation for additional assembly lines at the Mladá Boleslav and Kvasiny sites**
› **Škoda Auto is one of the first companies in the Czech Republic to use AI-supported predictive maintenance**

Mladá Boleslav, 22 February 2023 – Škoda Auto is using AI-based image recognition to ensure timely identification of maintenance needs on the assembly line. At the main plant in Mladá Boleslav, the Škoda FabLab has installed a system that continuously monitors the assembly line equipment. It is connected to a computer that uses Artificial Intelligence (AI) to detect irregularities in the processes and identify any required maintenance work. Škoda Auto is thus one of the first companies in the Czech Republic to use the possibilities of AI-supported predictive maintenance.

Miroslav Stejskal, Predictive Maintenance Coordinator, Škoda Auto Central Technical Service, says: "At Škoda Auto we are committed to predictive maintenance as a means to ensure that our production equipment is always in perfect shape. An AI system constantly checks the current process status against the optimal baseline conditions. It's taught to identify certain patterns, constantly adding to its knowledge base and recognising changes immediately. This enables us to react promptly, optimises the efficiency of our processes and ensures the best possible utilisation of our production capacities."

Cameras on the assembly line's overhead conveyor
The images of equipment and parts subject to wear, such as girders, bolts or cabling, are captured by cameras on the overhead conveyor of the assembly line. As soon as the AI-based computer connected to the camera detects irregularities in the process, or a need for maintenance actions, it flags them in real time.

Continuous checks enable early detection of required maintenance measures
"Magic Eye" instantly compares its high-precision photographs against thousands of stored images. This enables it to detect departures from the optimal baseline conditions and to identify sources of error. The use of blue light ensures that the AI tool reliably differentiates between cracks and scratches and makes the correct diagnoses. In addition, the system continuously expands its knowledge base. If it finds a worn bolt, for example, it marks the

spot as error-free as soon as the part has been replaced and checked again. To evaluate detected deviations, the system uses information on irregularities it has identified in the past.

Current use on the assembly line for the Enyaq iV and Octavia models

Škoda is using "Magic Eye" at its main plant in Mladá Boleslav, on the assembly line for the Enyaq iV and Octavia models. This makes Škoda Auto one of the first companies in the Czech Republic to use the possibilities of AI-supported predictive maintenance.

To enable further optimisation of the system and accelerate wider integration at the Mladá Boleslav and Kvasiny sites, the FabLab has simulated a section of the assembly line. This "implementation arena" can be used to experiment with different camera settings, configure system parameters and simulate damage to the assembly line.

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Media image

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Source: Škoda Auto

Škoda Auto

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› currently offers its customers twelve passenger-car series: the Fabia, Rapid, Scala, Octavia and Superb as well as the Kamiq, Karoq, Kodiaq, Enyaq iV, Enyaq Coupé iV, Slavia and Kushaq.
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