

DXC TECHNOLOGY X GREENMATTERAI GMBH

Zero-defect Welding, Powered by AI and Synthetic Data Precision

DXC and GreenMatterAI advance automatic weld inspection with AI and synthetic images, solving data bottlenecks for fast, scalable deployment.

The Challenge

Vision AI can automate inspection scenarios across the value chain while improving quality, safety and cost efficiency of production processes. However, organisations usually face several critical challenges which hinder the effective development and deployment of Vision AI applications. These challenges include insufficient labelled data, high costs and time with manual data pipelines, unbalanced and error-prone real datasets, as well as a lack of robustness and low performance. Especially for the inspection of welding defects, organizations often encounter data bottlenecks.

The Solution

DXC and GreenMatterAI jointly improved welding defect detection by combining advanced analytics and synthetic data-driven AI. GreenMatterAI provided high-fidelity synthetic datasets and trained vision AI models tailored to identify welding defects. Supporting the manufacturer in solution design, DXC integrated these models with cus-

tom-built quality control applications and applied analytics for real-time monitoring, root cause analysis, and process optimization across the production line. This synergy enhanced detection accuracy, reduced false positives, and enabled fast deployment without the need for costly, manually labelled data.

The Outcome

By combining strengths, the two companies achieve a measurable step forward in automated welding quality control. GreenMatterAI's precision-engineered synthetic datasets and ready-to-deploy models enable smarter, faster iterations of the Vision AI applications, DXC builds for its manufacturing clients. Integrated seamlessly into production environments, these applications optimize processes through automated, reliable quality control while solving data bottlenecks. The result: improved detection accuracy, fewer false positives, and faster rollout without manual data labelling. The teams currently work on scaling the solution and explore further applications like cargo validation in logistics.

GreenMatterAI GmbH

GreenMatterAI achieves superior performance of their vision AI tasks through high-quality, low-cost, accurate, synthetic training image data.

GreenMatterAI's service delivers high-quality, error-free, cost-efficient synthetic image data for training vision AI by reducing the cost of obtaining labelled images and balancing training data.



Headquarters
Berlin, Germany

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No. Employees
1 – 10

Website
www.greenmatter.ai

Acknowledgement

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About STARTUP AUTOBAHN powered by Plug and Play

STARTUP AUTOBAHN powered by Plug and Play is an open innovation platform that provides an interface between innovative tech companies and industry-leading corporations.

The basis of the program is the partnership that develops between startups and the corporate business units. The two entities hold an equal footing from the get-go: together they evaluate the potential for a joint venture, move forward to pilot the technology, and work to achieve the ultimate goal – a successful production-ready implementation.

Designed with the intention to exceed startup acceleration, STARTUP AUTOBAHN powered by Plug and Play moderates a community for collaboration with a focus on implementable results.

Over the years, the platform has successfully cultivated over 500 projects with more than 350 startups since its founding in 2016. ■

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