Case Study: Transforming Manufacturing & Quality Control with Databae

Overview

A global manufacturing company sought to enhance its **defect detection, process optimization, and predictive maintenance** through AI-driven quality control. However, manually labelling images and sensor data from production lines was slow, costly, and prone to human error. By integrating **Databae's AI-powered data labelling platform**, the company significantly improved efficiency, accuracy, and scalability in its annotation workflow.

Challenges

1. **High-Precision Defect Detection** – Annotating microscopic defects in machinery components required extreme accuracy.

2. **Large-Scale Data Processing** – Analysing thousands of images and sensor data points per day required automation.

3. **Manual QC Limitations** – Human inspectors struggled with consistency and speed in defect identification.

Solution: Implementing Databae's AI-Powered Labelling System

The company leveraged **Databae's intelligent workflow** to streamline and automate its quality control processes. Key features utilized included:

- **Image Classification & Object Detection** – Accurately tagging defective vs. non-defective parts in real-time.

- **AI-Powered Workflow & Levelling Mechanism** – Assigning high-complexity annotations to skilled technicians while automating simpler tasks.

- **Video Frame-by-Frame Analysis** – Tracking defects in moving assembly lines for enhanced process optimization.

- **Two-Way Swipe QC & Rectification Tools** – Ensuring high annotation accuracy with built-in validation and correction workflows.

Results

✅ **45% Faster Defect Identification** – AI-assisted labelling reduced manual workload and improved detection speed.
✅ **30% Cost Reduction** – Optimized human-AI collaboration reduced operational expenses.
✅ **Enhanced Quality Assurance** – Improved labelled datasets led to a **20% increase in defect detection accuracy**.
✅ **Scalability for High-Volume Production** – Serverless architecture enabled seamless expansion across multiple manufacturing sites.

Conclusion

By integrating Databae, the manufacturing company **optimized its quality control processes**, improving defect detection and reducing operational costs. This resulted in higher production efficiency and reduced waste, ensuring superior product quality.

Looking to enhance your manufacturing AI capabilities? Try Databae today!