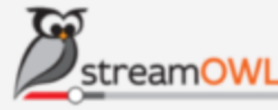


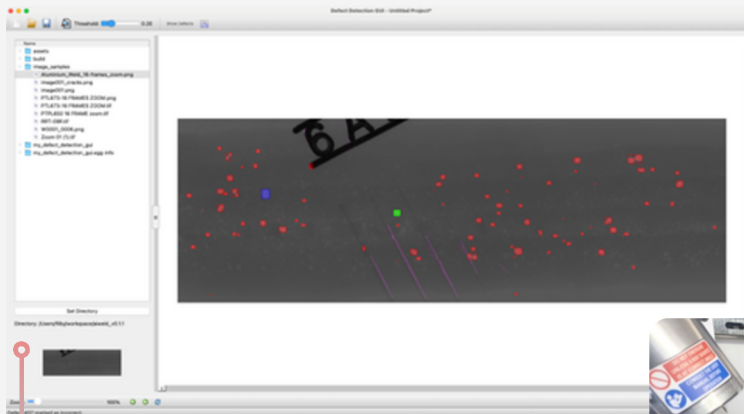
AIWELD

Weld quality control with Artificial Intelligence



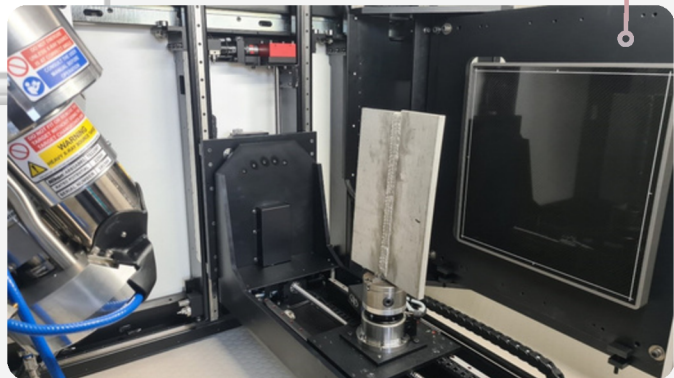
CHALLENGES

Weld quality has always been a critical factor in ensuring **safety, compliance, and performance across industries**. Yet, traditional **radiograph inspection methods** relied on manual evaluation, which was often slow, costly, and prone to human error. **Inconsistent results, inspector fatigue, and the growing demand for higher throughput** created serious challenges for manufacturers aiming to maintain quality while optimizing efficiency. These limitations not only increased operational risks but also hindered productivity and competitiveness. Our project set out to transform this process by tackling the inefficiencies of manual inspection and paving the way for faster, more reliable, and scalable quality assessment.



User interface for weld radiograph inspection

Radiograph inspection for defect detection



THE SOLUTION

By analyzing weld radiographs with state-of-the-art AI algorithms, the system automatically **detects and classifies defects with a high degree of accuracy and consistency**. This approach eliminates subjectivity, reduces inspection time, and ensures reliable results even at scale. The solution delivers actionable insights that enhance quality control, improve safety standards, and support compliance with industry regulations. With AI-driven automation, weld inspection becomes faster, more precise, and seamlessly integrated into industrial workflows.



RESULTS

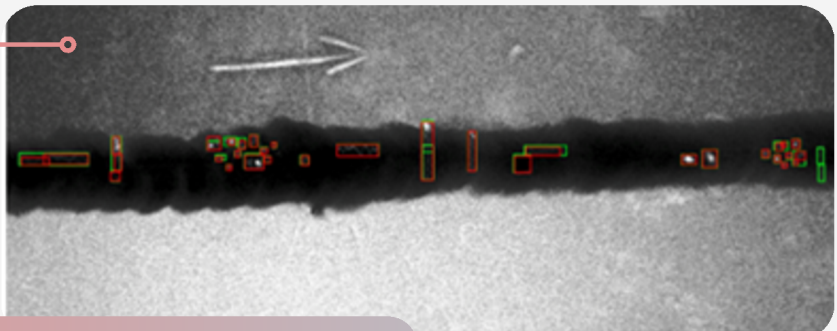
The project delivered significant improvements in weld quality assessment by **combining computer vision with AI-driven defect detection**. Most notably, the system achieved over **98% classification accuracy**, demonstrating its reliability and robustness across diverse radiograph datasets.

This level of precision ensures safer operations, fewer undetected defects, and greater confidence in inspection outcomes. In addition to accuracy, the automated process reduced inspection times substantially, cutting costs and improving productivity. The solution has proven its scalability, offering **consistent performance in industrial environments** while minimizing reliance on manual inspection. These results mark a major step forward in non-destructive testing innovation.

IMPACT

Participation in the EARASHI project has provided StreamOwl with **significant benefits that accelerated the development and deployment of our weld inspection solution**. Through the project, we gained invaluable technical support that helped refine our AI and computer vision models, as well as financial support that reduced the risks and costs associated with innovation. Moreover, **EARASHI's strong networking and promotion activities enhanced our visibility within the European industrial ecosystem**, opening doors to new collaborations and market opportunities. This combination of resources and exposure has strengthened our competitiveness and positioned us as a trusted player in advanced inspection technologies.

Automated Defect Recognition with AIWELD



GET IN TOUCH WITH AIWELD

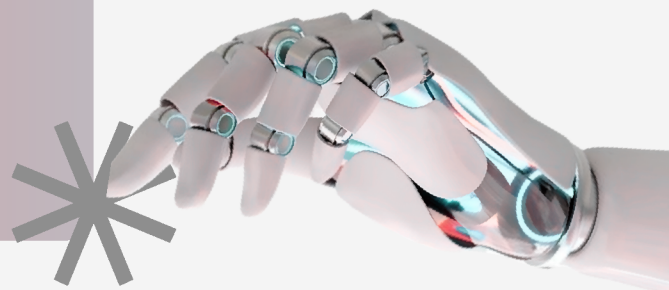


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