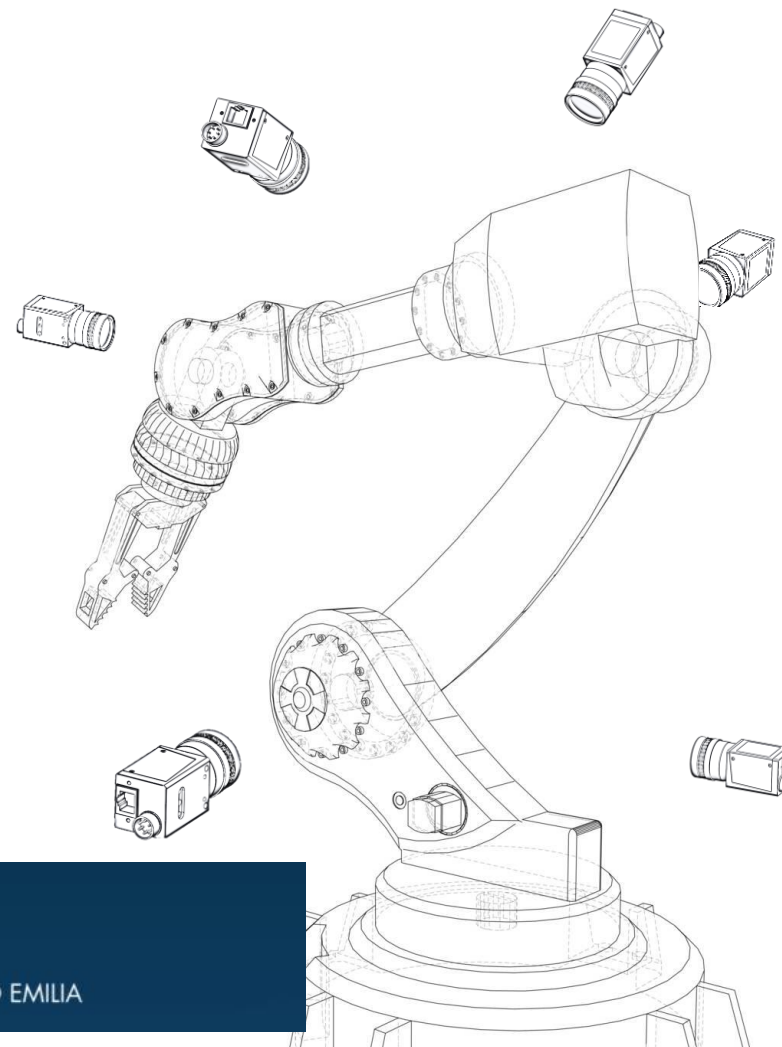




INVENTIO.ai

Artificial Intelligence for Industry Made Simple

Strumenti di IA per ispezioni visive al 100%



UNINDUSTRIA REGGIO EMILIA

Casi d'uso di AI applicata ai processi aziendali

About Us

INVENTIO.ai provides factories with powerful and easy-to-use AI software solutions to reach the best production quality

Skilled Technical Team



Our team is made of experienced industrial and software engineers obsessed with building a great product

Industrial Automation Expertise



We combine years of field experience gained in industrial automation and quality to solve real manufacturing problems

AI based solutions



Our solutions enables the usage of latest AI developments directly in line

Trusted by our Customers and Partners...



And others...

...supported by Italian and International Investors



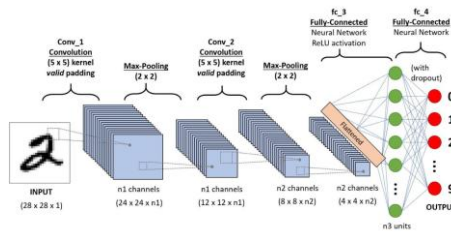
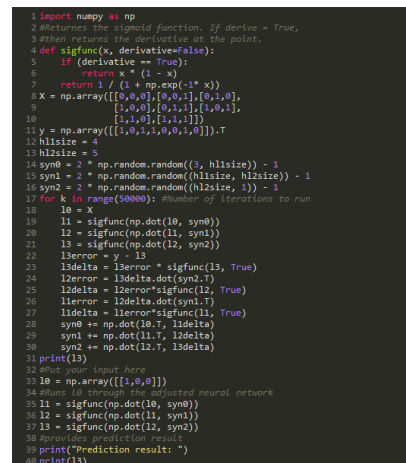
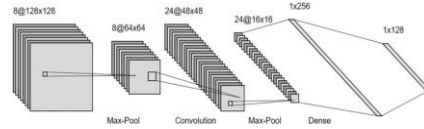
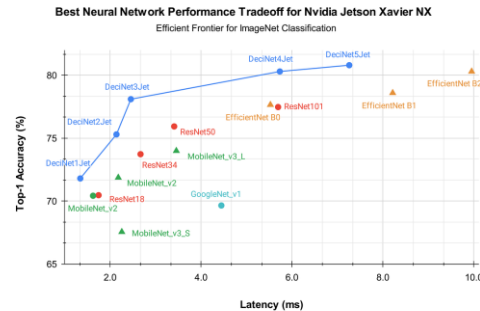
Our Pillars

Software Development



Our software integrates cutting-edge artificial intelligence technologies for Machine Vision applications.

We rapidly adapt the latest AI technologies to the needs of manufacturing lines.

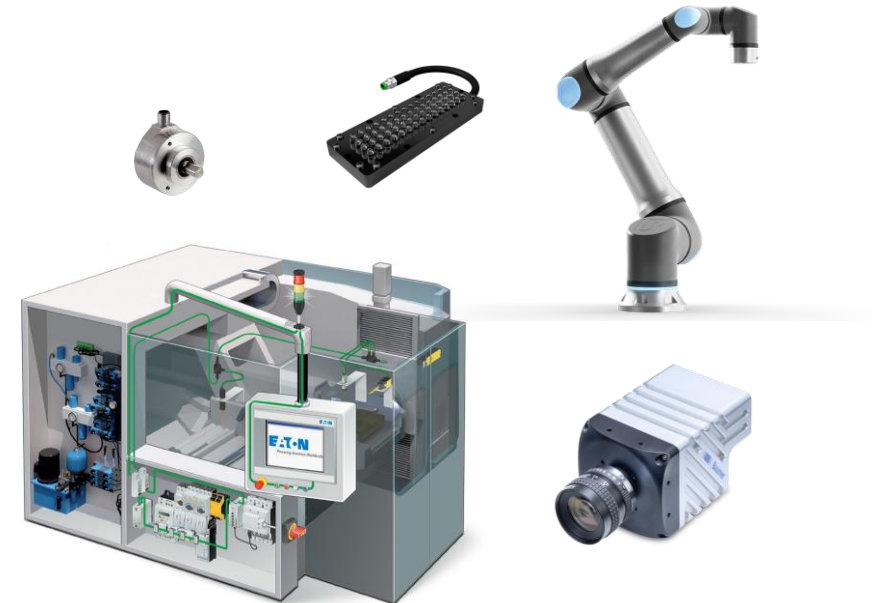


Automation Engineering



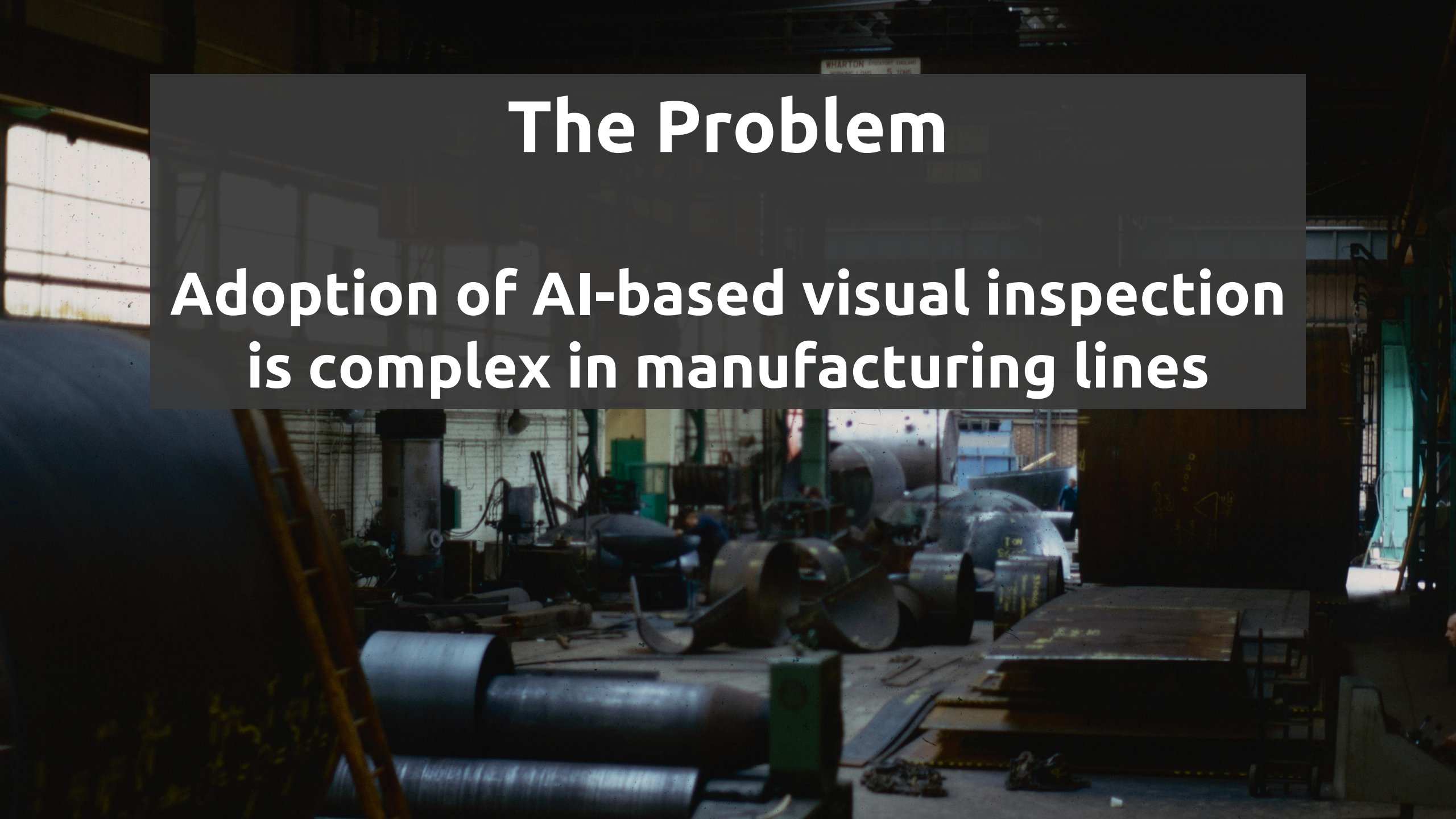
Our engineers are automation experts: we help our customers to shape their needs.

Our software helps our customers in building innovative industrial designs and solutions.



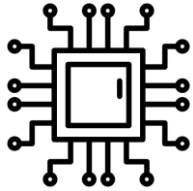
The Problem

**Adoption of AI-based visual inspection
is complex in manufacturing lines**



Why is AI-based visual inspection struggling to be deployed in manufacturing lines?

1. Lack of Edge-AI solutions



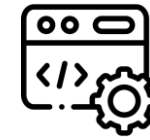
AI cloud-based solutions are not robust enough for manufacturing lines and require higher infrastructure and training costs.

2. Complex training environment



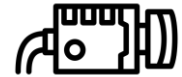
Training AI is often difficult in manufacturing lines due to a lack of sample datasets and due to the long waiting times for AI to be trained remotely.

3. Lack of internal skilled resources



Hiring and retaining resources to develop and maintain custom AI and Machine Vision solutions is difficult and costly.

4. Poor machine vision tech



Existing commercially available machine vision products fail to provide easy-to-use and flexible solutions.





INVENTIO.ai

Artificial Intelligence for Industry Made Simple

Our solution: the Industrial Apps

1. Easy integration and smooth UX

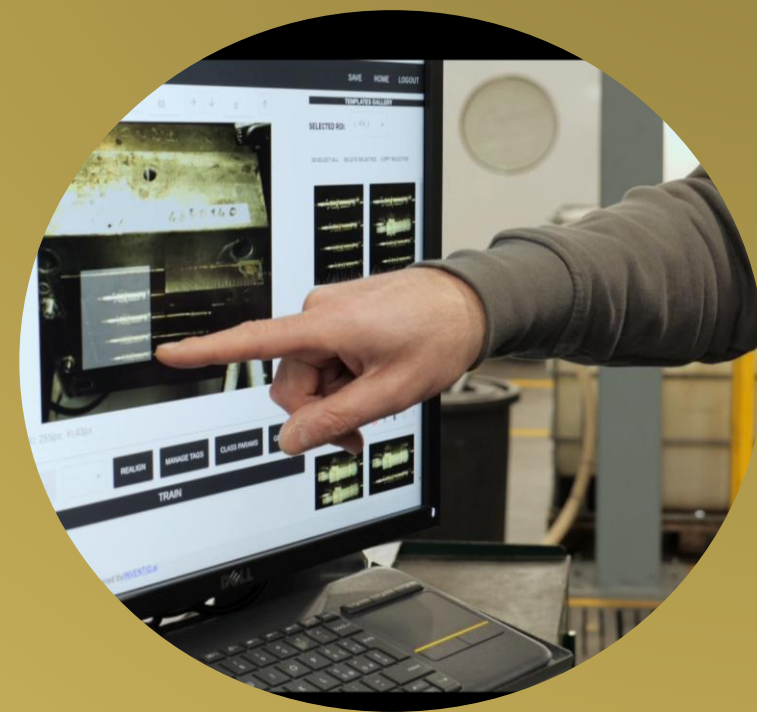
Low-code interfaces to interact with industrial machines and IoT

2. Quick AI training on the line

Cutting-edge deep learning technologies to enable easy machine vision adoption in the shop floor

3. A visual total production monitoring System

A flexible and scalable solution to manage multiple installations through a centralized system



Industrial Apps: quick AI training, directly on the line

1

Show examples on the line

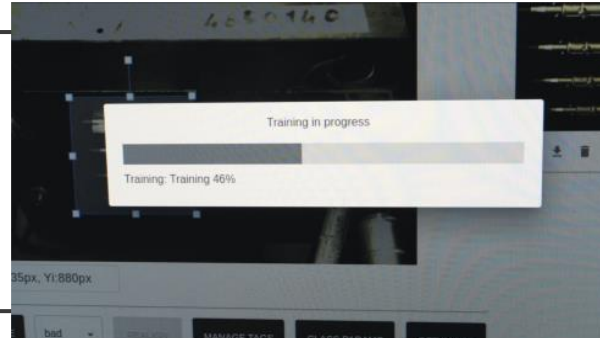
Use the app to simply and easily get samples of the task to train the AI.



2

Train the AI in a few seconds

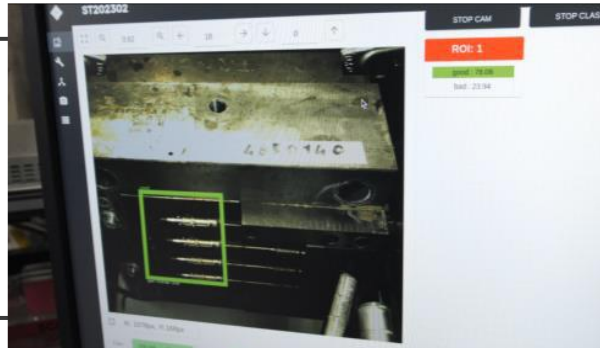
Click "train" and in a few moments, the AI learns without an internet connection.



3

Test the AI and start working

With zero deployment time, the app enables the machine to perform the task!

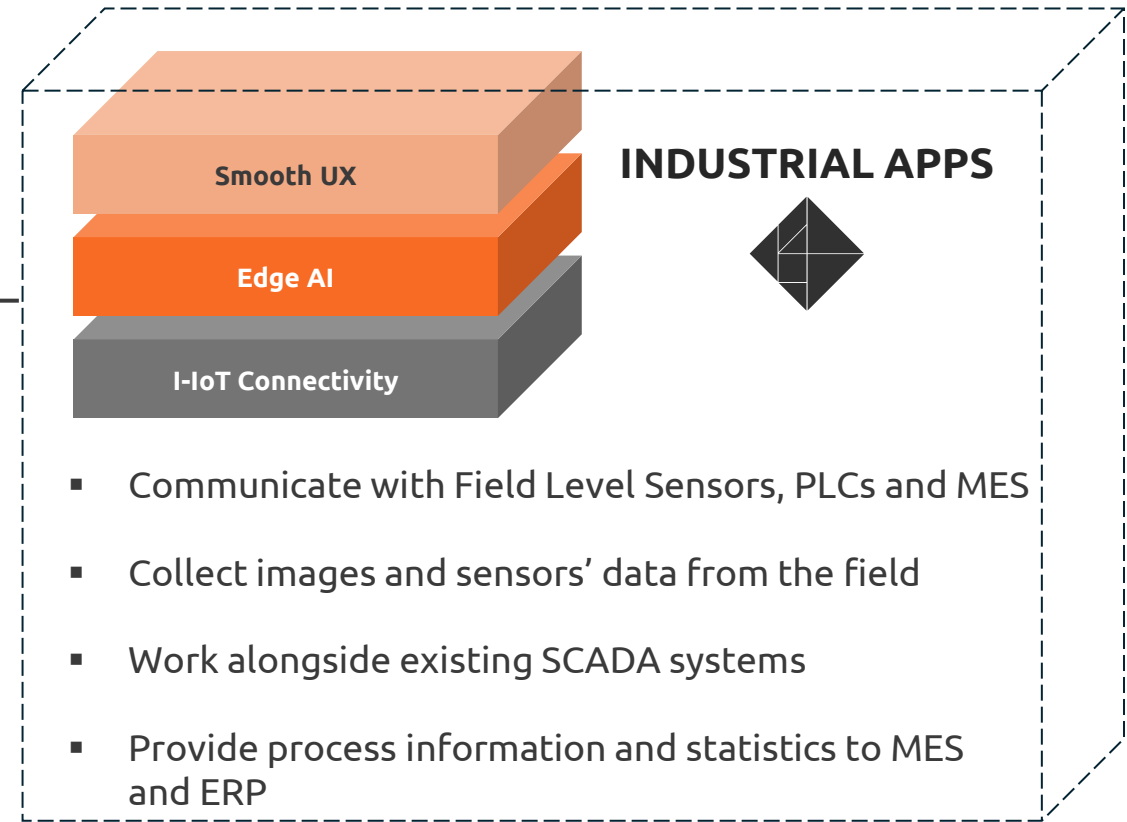
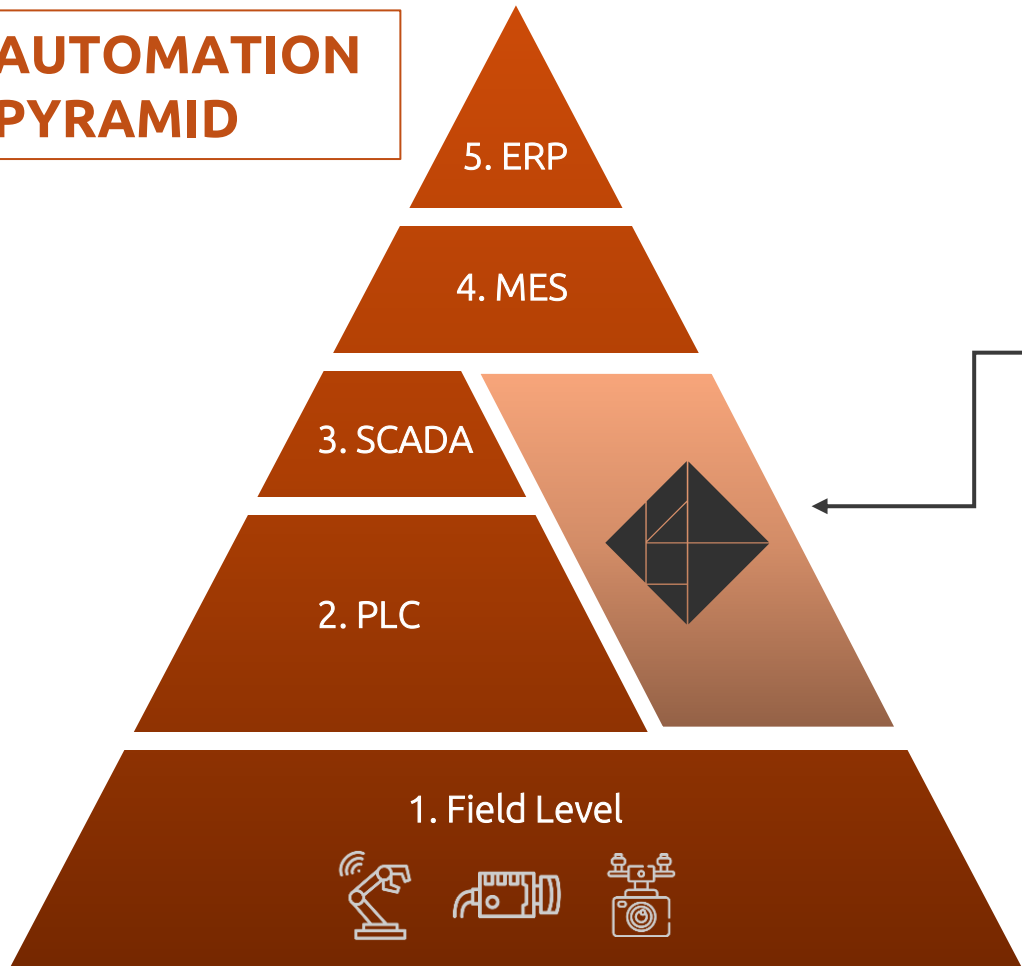


Thanks to the Quick Train functionality, you can iterate the process for every new product line!



MES Integration Ready: information can flow from sensors to your MES and ERP

AUTOMATION PYRAMID



Hardware Agnostic: our software can be easily integrated with a great variety of physical interfaces

Industrial PCs and GPUs



NVIDIA®

ADVANTECH

SIEMENS



And others...

Industrial Cameras...



Baumer

BASLER

BALLUFF

...and Robots

FANUC

KUKA

ABB

YASKAWA

And others...

Connection Protocols [IT/OT]

- Siemens S7
- mqtt
- http
- OPC-UA
- EtherCat
- Modbus
- EtherNet/IP
- TCP/IP
- FTP

And others...



Our Industrial Apps can solve the limitations of AI-based Machine Vision applications in manufacturing lines



100% quality and control objectification thanks to optimized AI models for manufacturing



Easy to use and maintain solution, trainable directly from the line by line workers



High value for money with an average 6-month ROI, really low setup costs



How we can support you

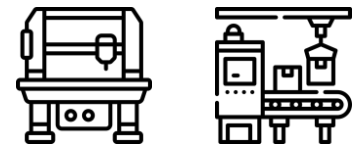
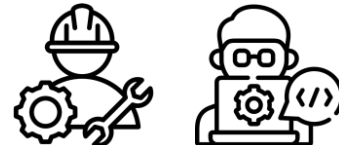
End Users:

- Support in designing and implementing the optimal machine vision solution for your plant
- Hardware selection
- Software license
- Support and specific training



System Integrators and OEMs:

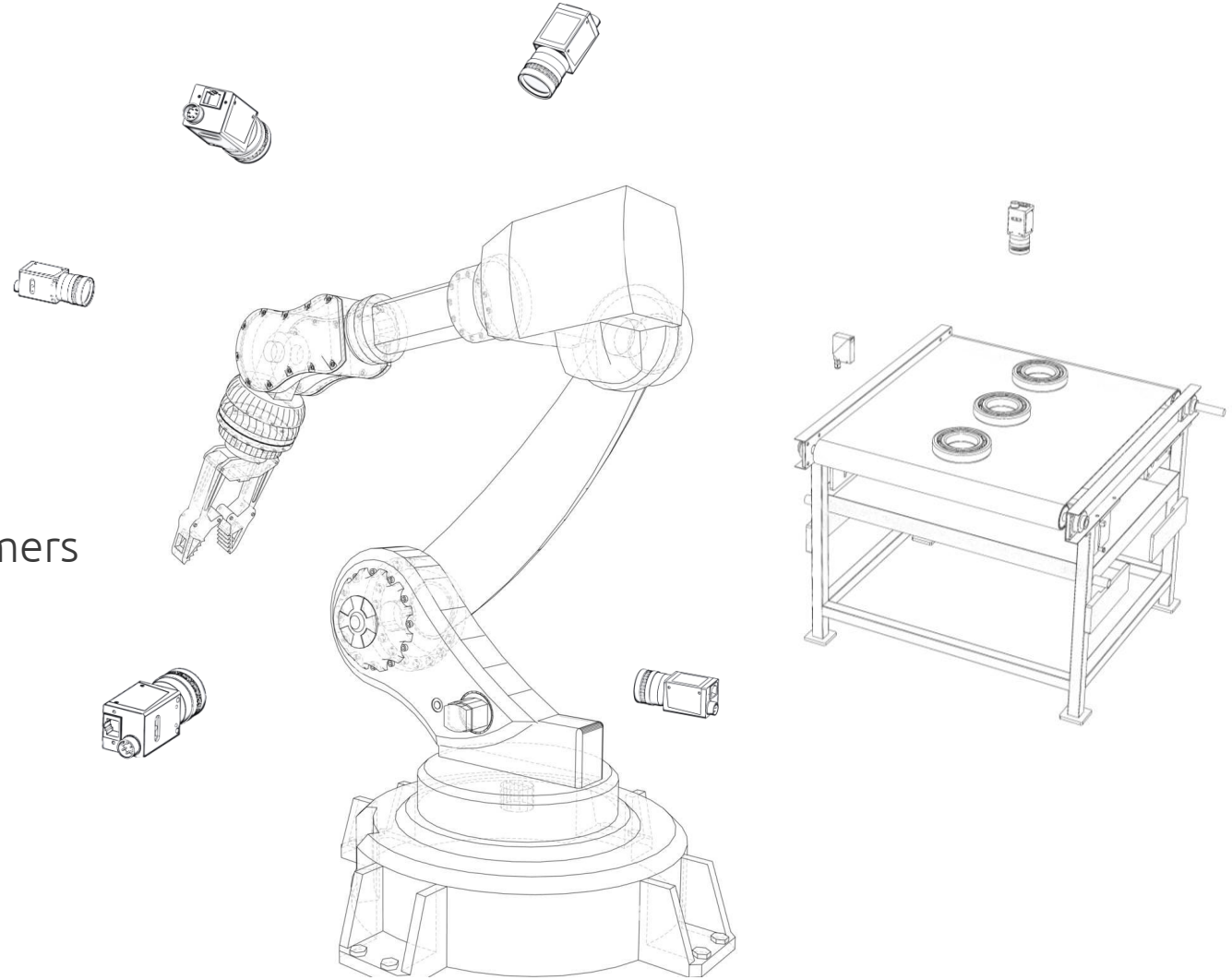
- Specific training to become experts in using our Industrial Apps
- Software license
- Advisory in designing optimal machine vision solutions for your customers or your industrial machines





Case Studies

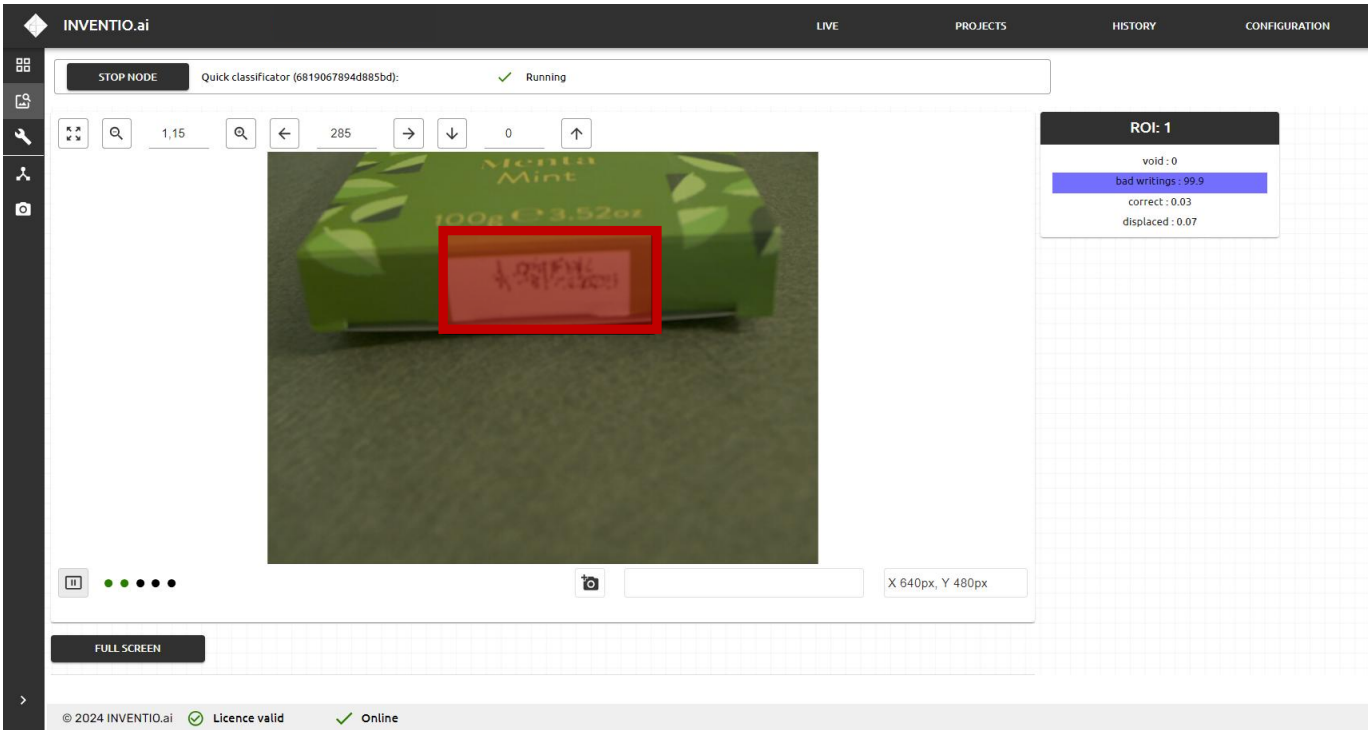
Examples of real value provided to our customers



Labels Quality Control for the Food Industry

Thanks to our software, the client, a market leader in the food industry, has been able to objectify the verification of label accuracy, bringing the rate of undetected errors to zero.

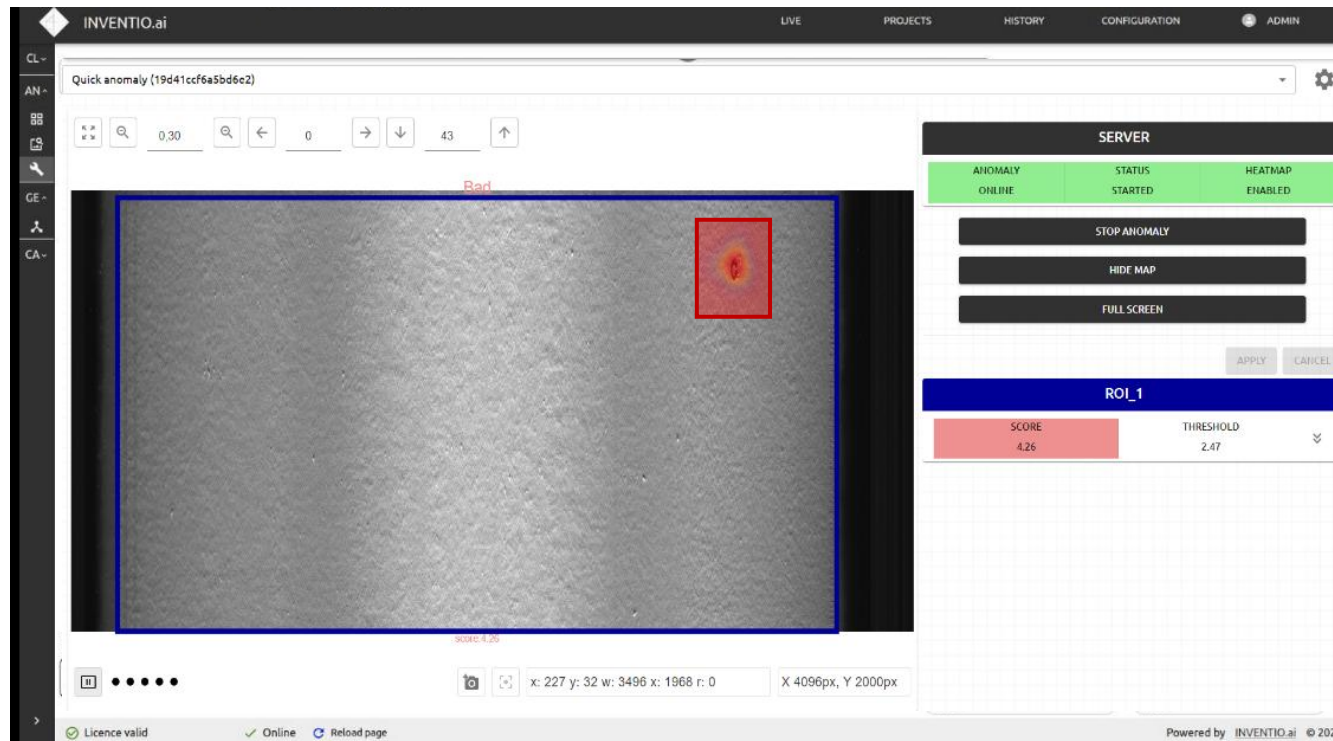
4X ROI thanks to an automated defect detection process



Process Intrusion Detection and Quality Control for Multilayer Plastic Films

Using line-scan cameras, INVENTIO.ai's software enabled the client to integrate visual inspection for intrusions in the plastic film production process, easily objectifying the quality control.

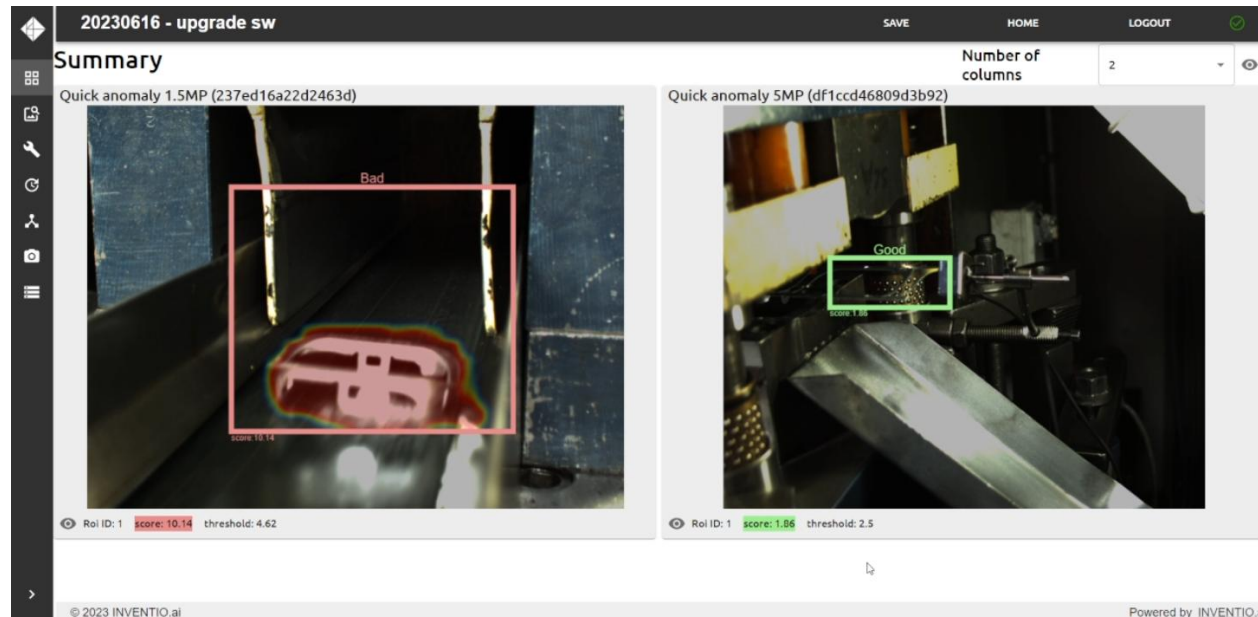
7 months ROI thanks to great reduction of machinery maintenance costs



Visual Inspection of Multi-Step Molding

This project allowed the client to achieve 100% automation in the visual inspection of intrusions and defects during iron molding, reducing issues for the molds.

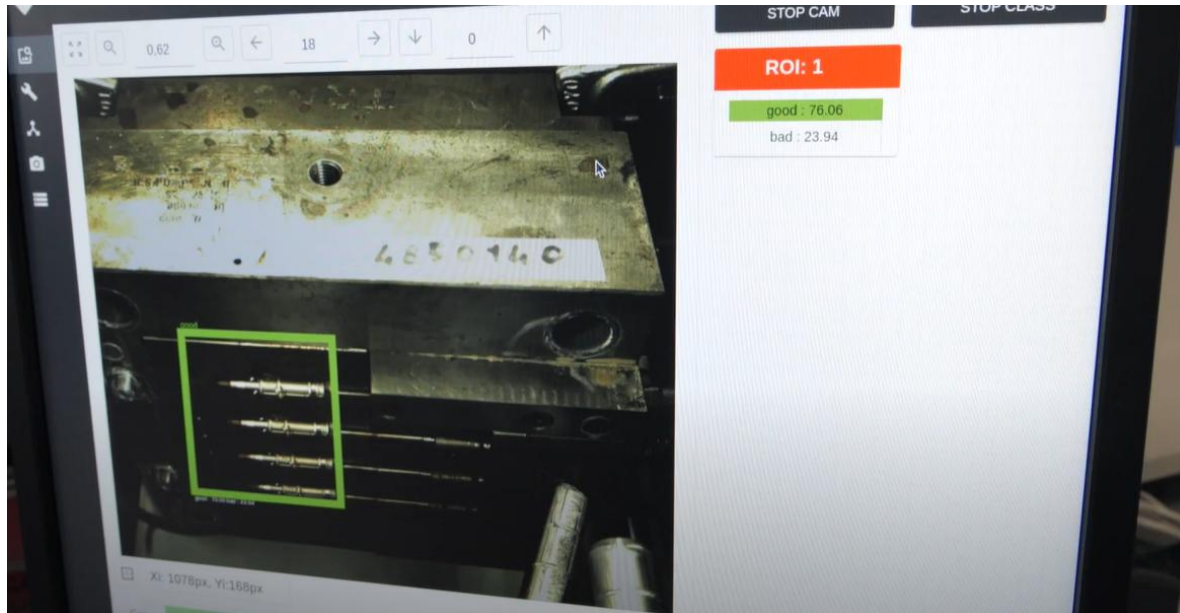
6 months ROI thanks to avoidance of costly molds' damages



Visual Inspection of Plastic Molding

This project allowed the client to achieve 100% automation in the visual inspection of intrusions and defects during plastic molding, reducing issues for the molds.

5 months ROI thanks to avoidance of costly molds' damages



Visual Inspection of Plastic ThermoForming

This project allowed the client to achieve 100% automation in the visual inspection of intrusions and defects after plastic molding, reducing undetected defects to nearly zero.

4 months ROI thanks to 100% automation of quality controls



INVENTIO.ai test nuovo stampo LIVE PROJECTS HISTORY CONFIGURATION ADMIN

STOP NODE Quick anomaly (0aec704f9f141fbd): Running

0,36 181 93

ROI_1

| SCORE | THRESHOLD |
|-----------------|-----------|
| 3,45 | 4,17 |
| MAP THRESHOLD | 0,8 |
| SCORE THRESHOLD | 4,17 |
| MAP SENSITIVITY | 5 |
| MAP SENSITIVITY | 0,01 |
| THICKNESS | 4 |

x: 93 y: 11 w: 2174 h: 1438 r: 0 X 2400px, Y 1449px

FULL SCREEN HIDE MAP

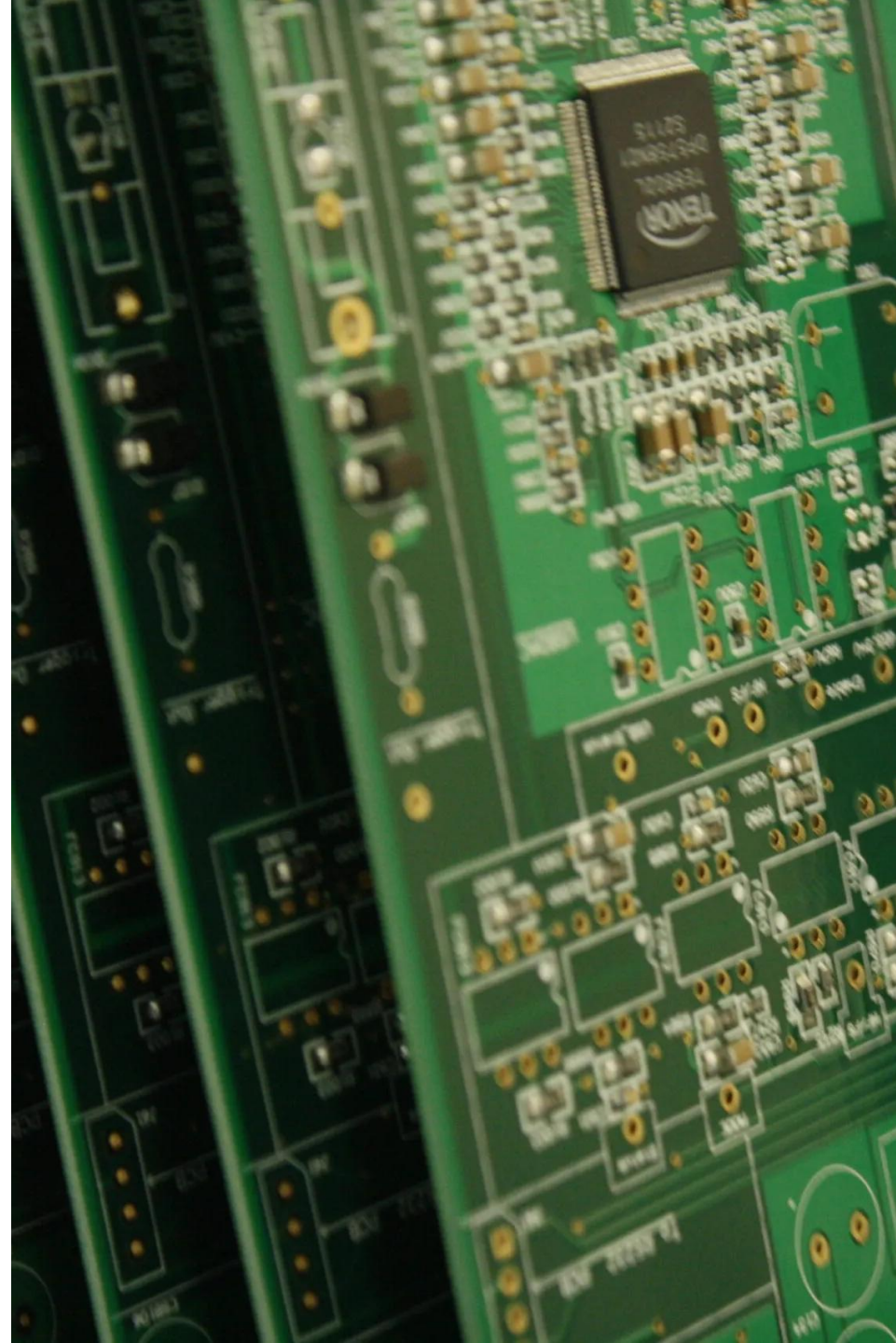
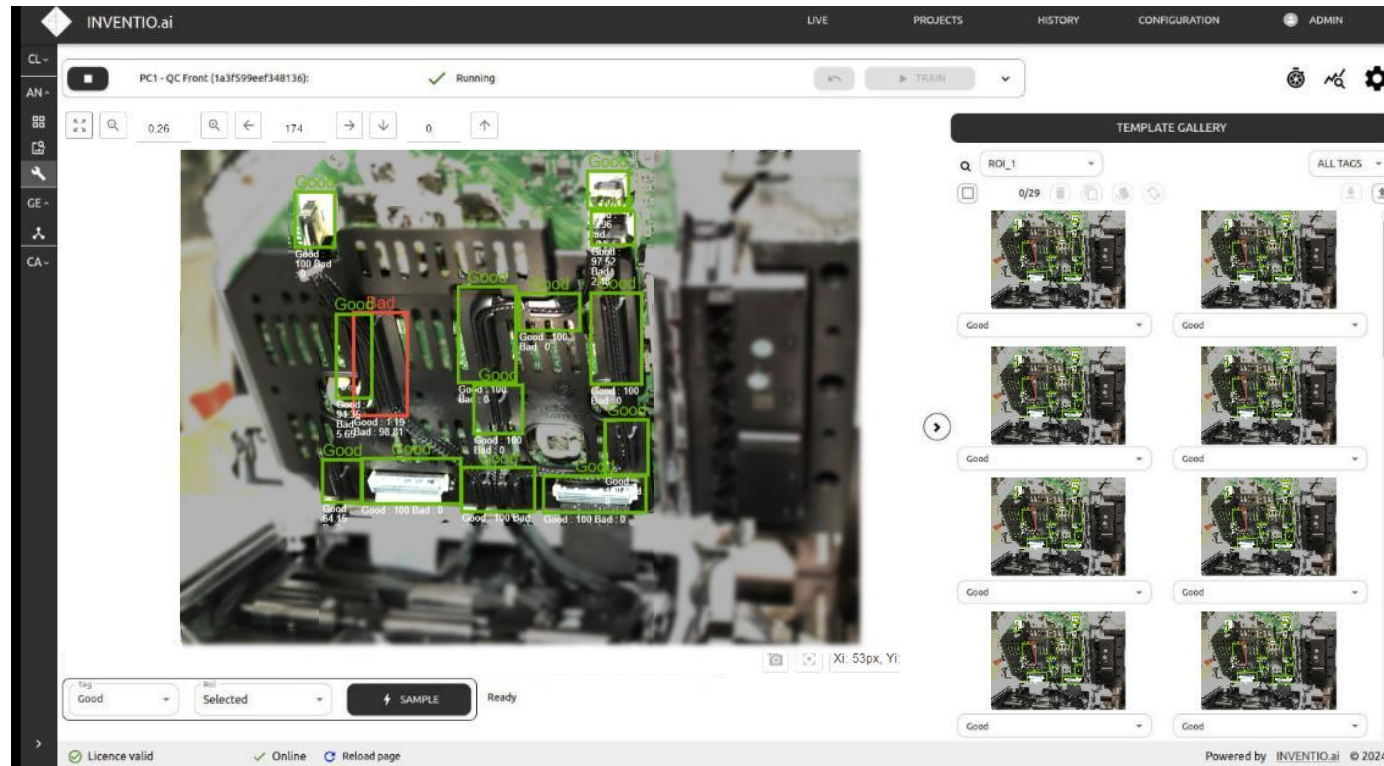
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Automotive PCB Guided Assembly Control

Visual control to support line workers in real time in correctly assembling connectors and cables for an automotive PCB. The control led to zero chances of incorrect assembly of wires and connectors.

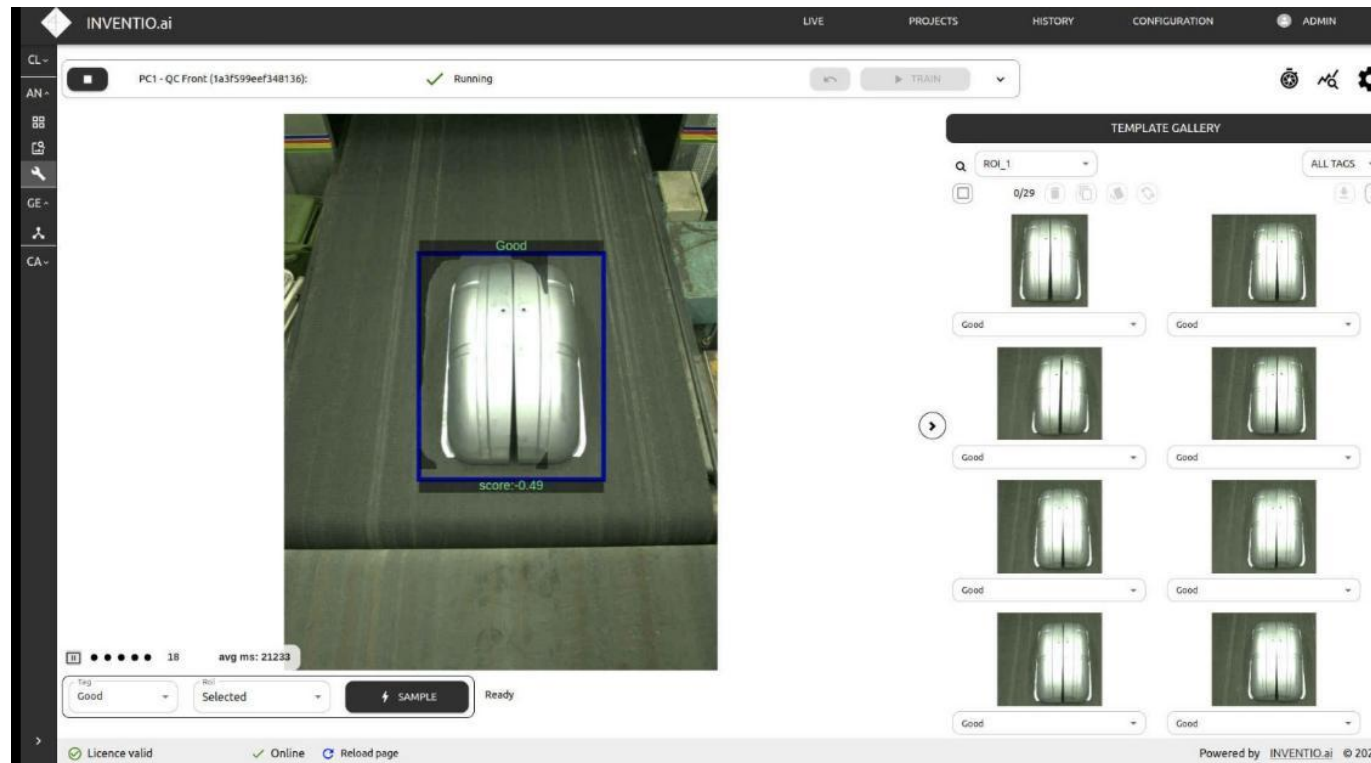
AI usage led to 80% cost reduction with respect to other traditional machine vision solutions



Welding Seams and Surface Quality Controls for Automotive Components

The control enabled the analysis of surface defects and welding seams using linear camera scans for defect detection. The solution identifies different kinds of welding defects, such as porosity and spatter.

Consistent reduction in undetected defects, reduction of human-based controls



follow us



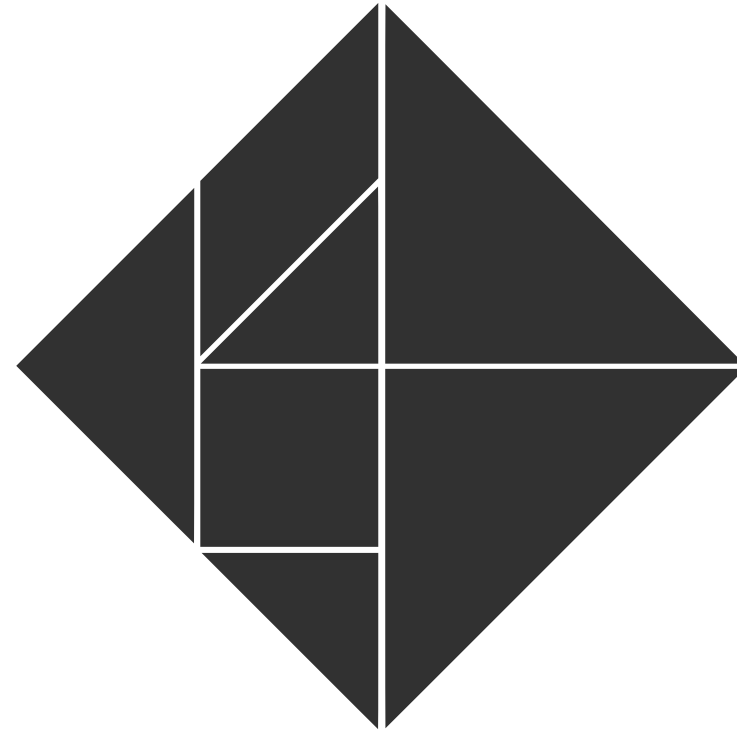
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