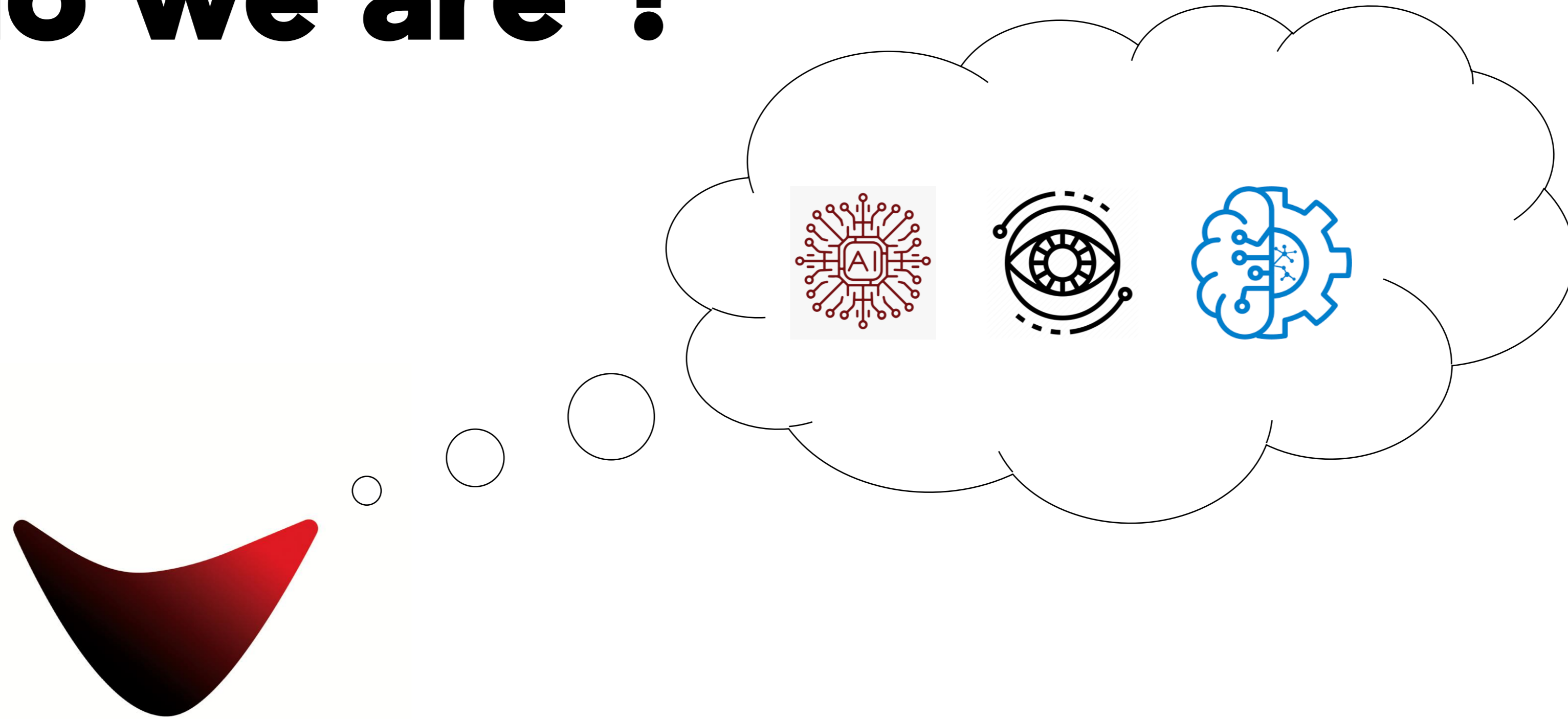


The logo icon is a stylized, downward-pointing shape with a red-to-black gradient, resembling a speech mark or a drop.

spechtLab.

An Intelligent movement

Who we are ?



spechtLab is a lean startup initiative supported by TUBITAK*, which is a leading R&D service provider who develops custom solution for computer vision and AI problems.

* TUBITAK : The Scientific and Technological Research Council of Turkey

we provide

Outsourcing



Consulting



we provide

Outsourcing



- ✓ Build a new computer vision solution for our costumers or make an existing system more robust.
- ✓ Provide a full cycle research and development of intelligence solutions:
 - ❑ Artificial Intelligence
 - ❑ Deep learning
 - ❑ Pattern recognition
 - ❑ Image processing

we provide

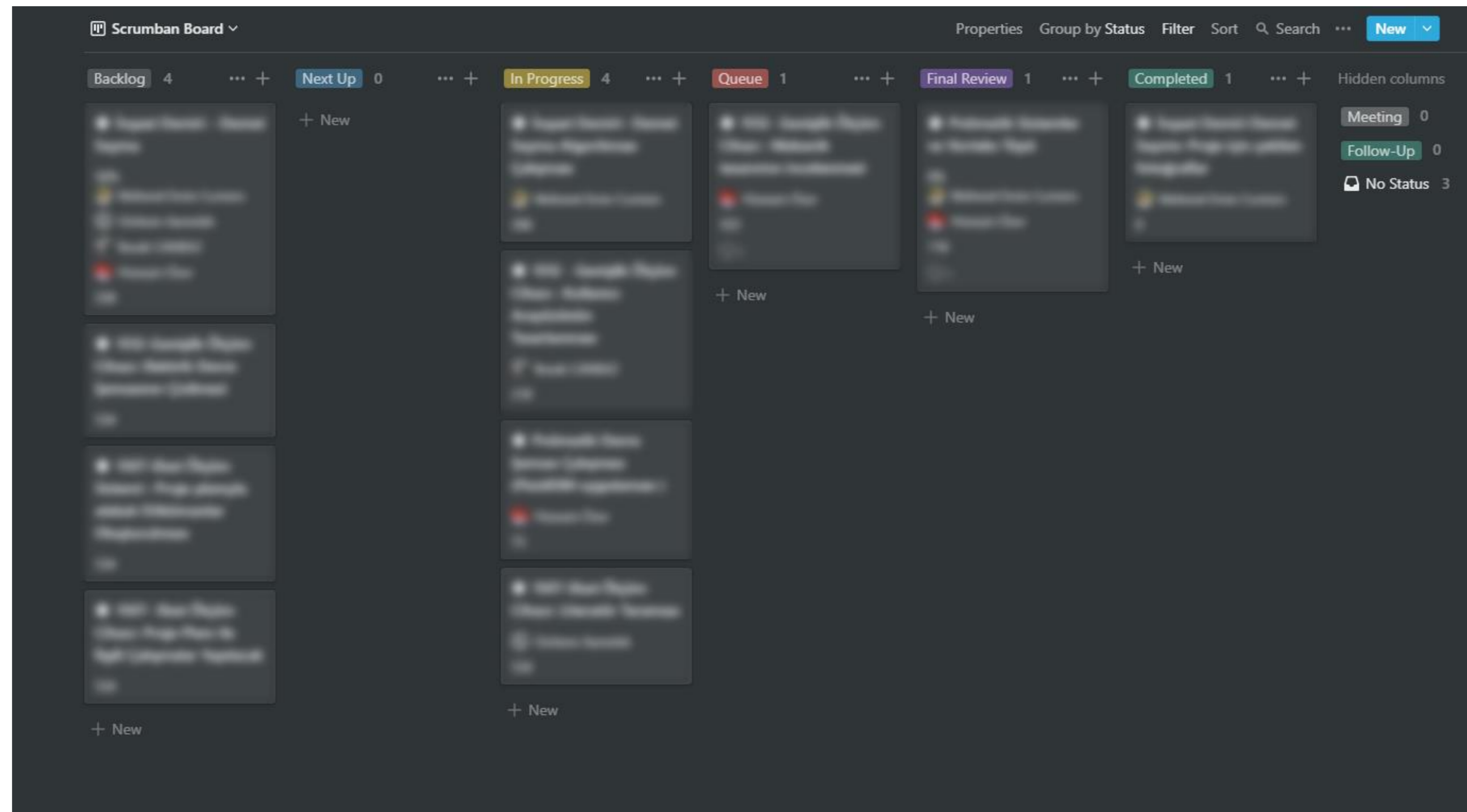
- ✓ Consulting services for startups and enterprises who wants to boost the development of their in-house computer vision systems by learning from experts in the AI field.
- ✓ We help companies to integrate AI Technologies by sharing our extensive knowledge and experience.

Consulting



Transparent Workflow

- ✓ Client have access to the documents with daily updates.
- ✓ Weekly video conference with client's team to discuss progress and plans near future.
- ✓ Clients have access to the Scrumban board and provided summary status report in the end of the week.
- ✓ Technical report in the end of each stage.



expertise

- Image/Video/3D processing
- Laser based triangulation
- Machine Learning
- Applied Maths
- Embedded systems

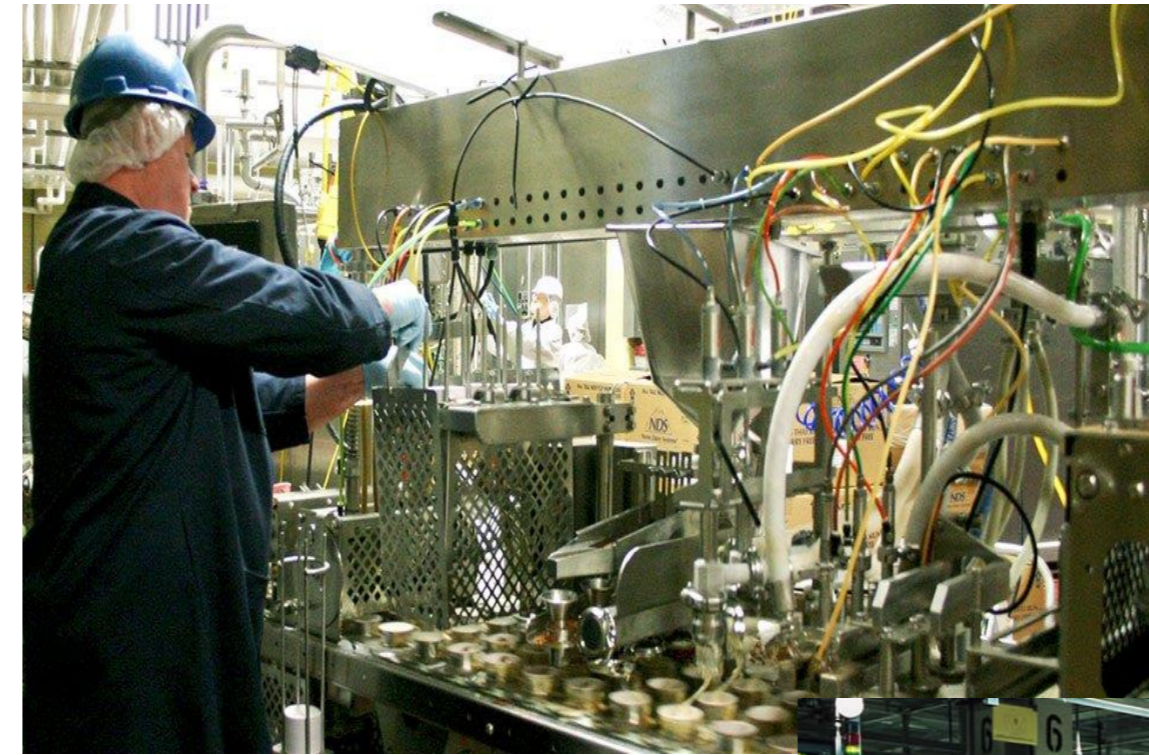




Background

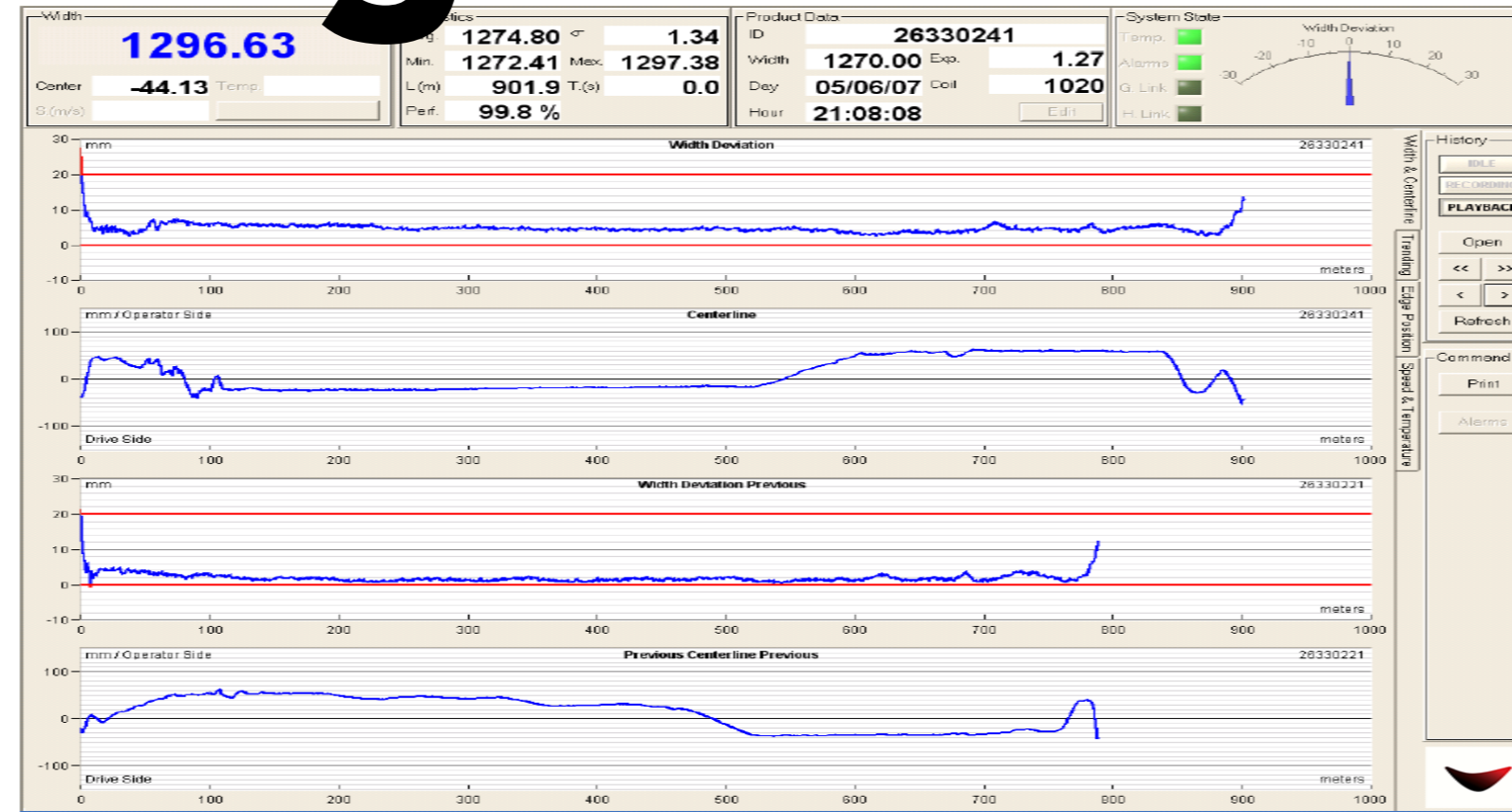
Key Areas

- ✓ Image segmentation
- ✓ Smart Image Processing
- ✓ Quality Inspection
- ✓ Monitoring of manufacturing processes
- ✓ Robotics
- ✓ Text detection and recognition
- ✓ Color detection
- ✓ People tracking and Identification
- ✓ PLC,SCADA,HMI



Hot/Cold Rolling Mill Width Gauge

- Width deviation
- Centerline deviation
- 0.1 mm accuracy
- 2 year database
- Communication with PLC and L2
- HMI Screen for instant tracking



spechtLab.

SpechtLab Line Serisi ölçüm cihazı ile malzeme genişliğinin ölçülmesi yüksek hız ve yüksek hassasiyette gerçekleştirilir.

5 mm ile 2000 mm arasında değişen demir çelik mamüllerinde 0.02 mm hassasiyette ölçümler gerçekleştirilebilmektedir.

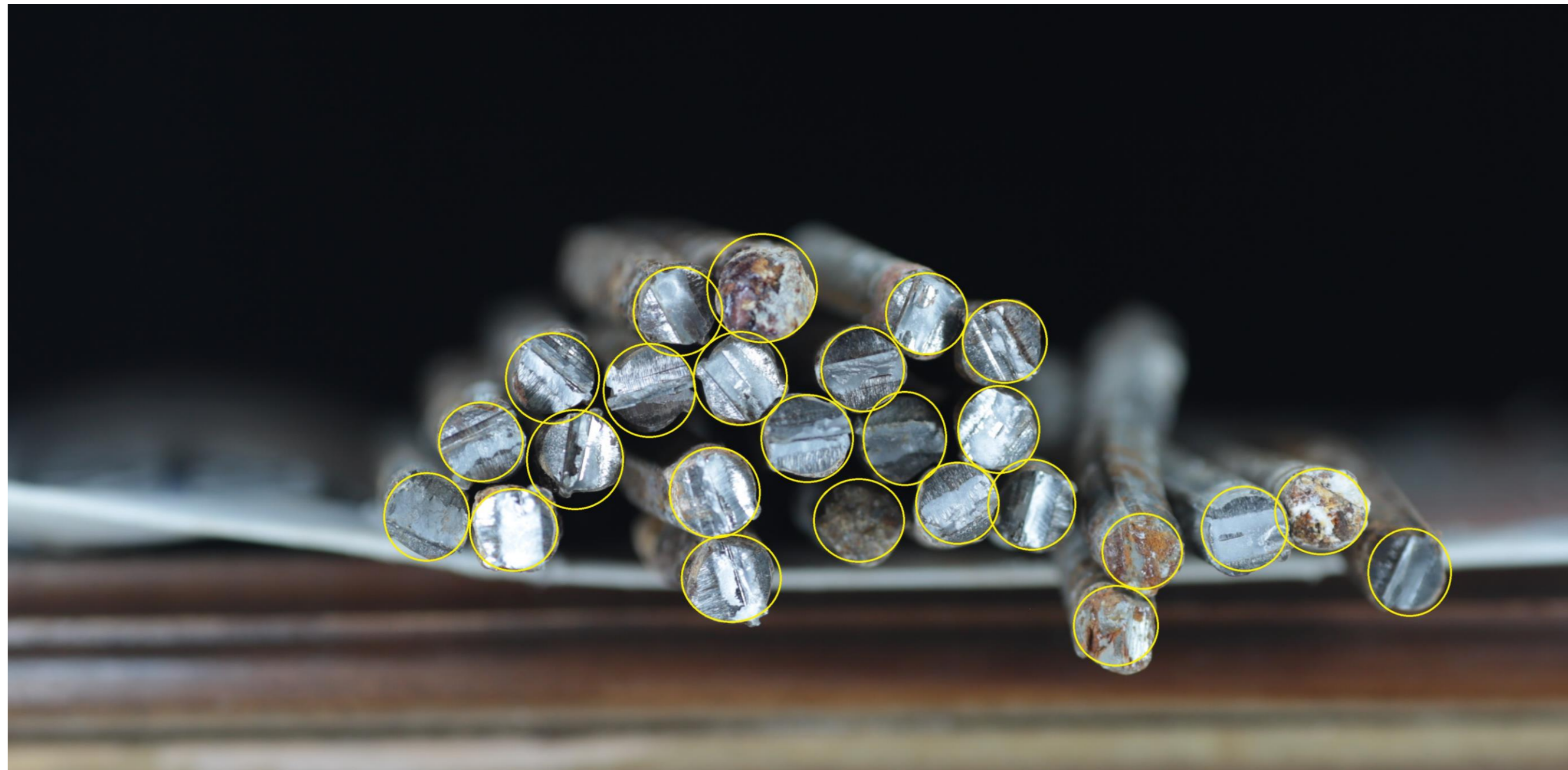
IP65 su soğutmalı muhafazası, 600°C ortam sıcaklıklarında bile çalışacak şekilde tasarlanmıştır.

Models	3K850	2K090	6M048
Kurulum Yüksekliği (mm)	3500	1200	600
Çalışma Genişliği	2090,4 x 2787,2	182 x 242,6	39,6 x 52,8
Ölçüm Aralığı (mm)	2000	185	40
Çözünürlük	850 µm	90 µm	48 µm
Hassasiyet	0,002	0,004	0,006

www.spechtlab.com
info@spechtlab.com

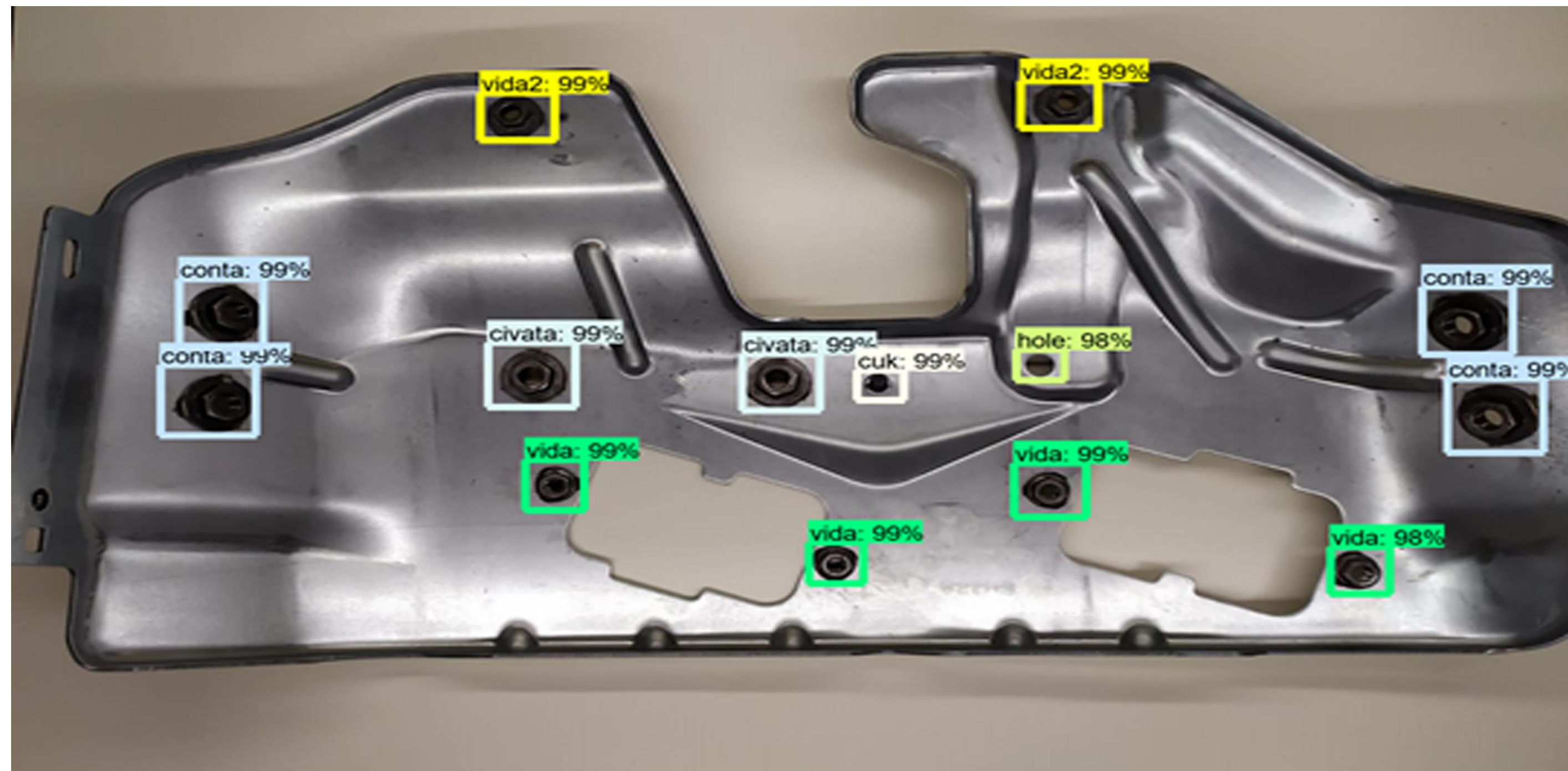


Rebar Counting



- Counting rebar with machine vision
- Minimum measurement 8 mm
- Communication with PLC and SCADA system
- Special camera and lightning equipment was used
- Software runs on Nvidia Jetson Board

Position Control for car spare parts with AI



- Detect welding parts with AI
- Measure distance between the welding parts
- %96,74 accuracy with AI
- Set of neural networks trained on 100K+ samples
- Communication with PLC and SCADA system

Surface inspection for wood industry



urun üzerindeki hata sayısı: 2



- Surface detection with machine vision
- Quality classification with AI
- Based on U-Net architecture for defect segmentation
- %96,54 accuracy
- Communication with PLC and SCADA system
- Inspection time reduced and automated.

Customer Count for Shopping Mall



- Gender/Age statistic
- Customer density
- Time based statistics
- Wearing mask detection, warning system if customer doesn't wear a mask
- 100k+ images used for training
- Support different input devices and video resolutions

Protective Equipment Tracking



- equipment tracking for hard hat, mask, glass, work clothes etc.
- warning system if customer doesn't wear designated items.
- Time based statistics
- 100k+ images used for training
- Support different input devices and video resolutions

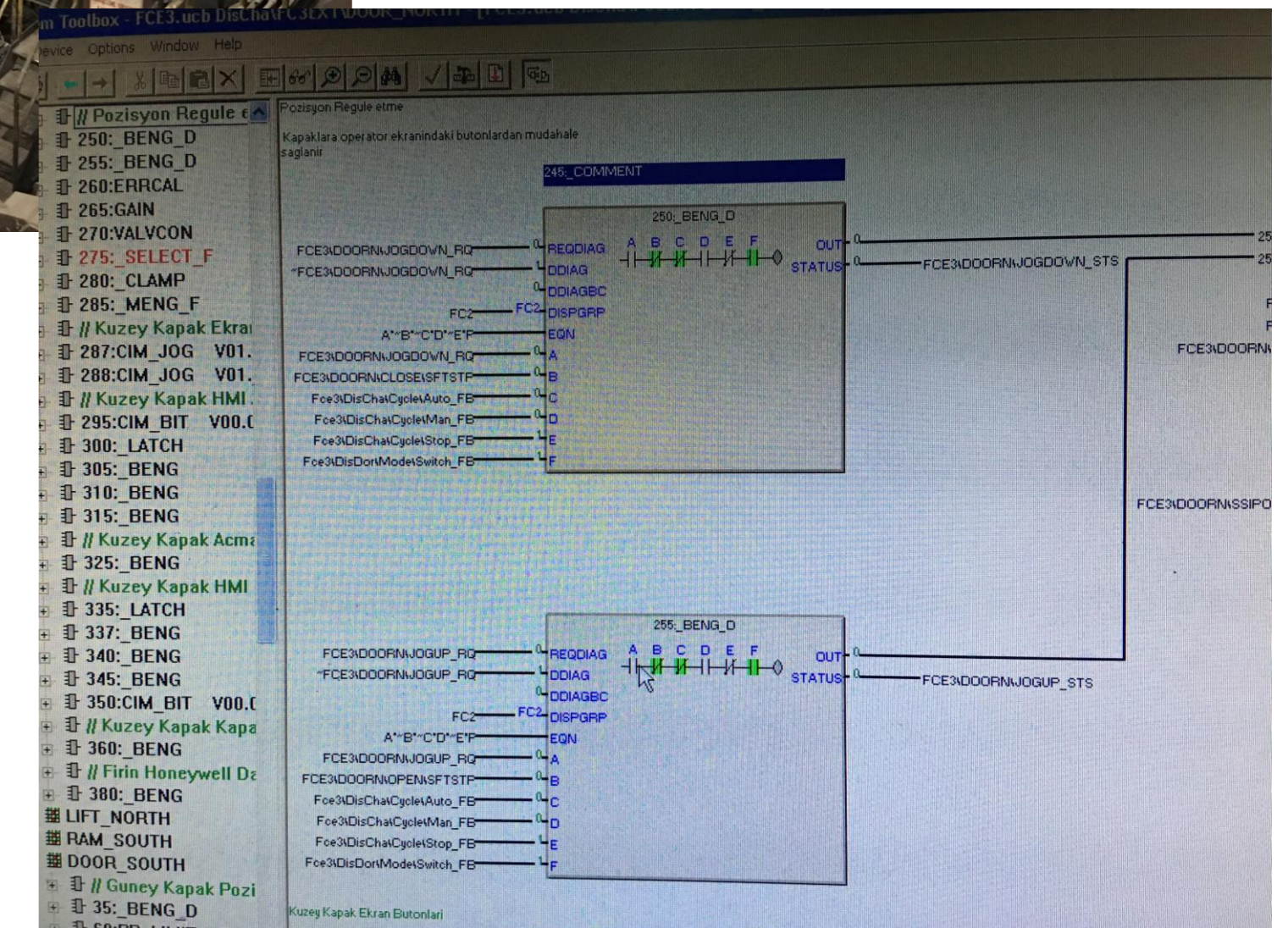
Smoke and Fire Detection System



- Monitoring the area
- warning system if smoke or fire detected.
- 50k+ smoke and fire images used for training
- Support different input devices and video resolutions

Modernization of Furnace Process

- ✓ Hot strip mill furnace charge and discharge process was modernized
 - ❑ Motor&Drive system was upgraded with ABB ACS800
 - ❑ PLC logics were implemented
 - ❑ SCADA system was upgraded.
 - ❑ New sensors (photocell, encoder, pyrometer) were integrated in the process.





Machine vision solution for efficiency..