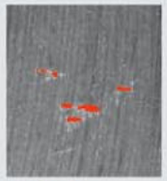
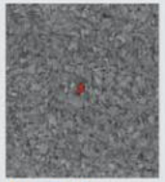
Deep Learning Surface Inspector

For the automatic detection of surface defects, damage and contamination on structured surfaces.

EyeVision masters the identification of defects on complex functional and aesthetically technical surfaces with the Deep Learning Surface Inspector based on Machine Learning.

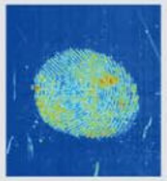


Defects

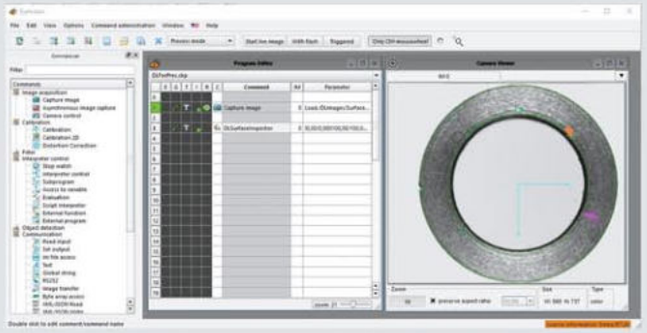


Impurity

Faults



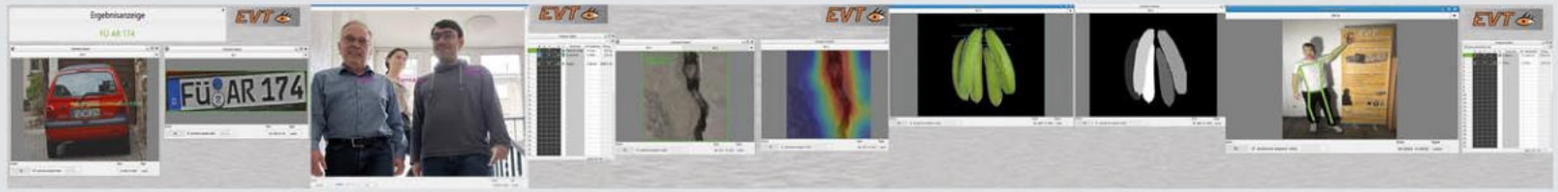
Contamination



EyeVision Machine Learning Surface Inspector Interface

Important advantages:

- No pre-learning
- No setting of parameters
- The algorithms adapt automatically to any any surface
- Evaluation of the inspected surface in less than 50 ms on Core i3



EyeVision Deep Learning

Artificial intelligence for Machine Vision

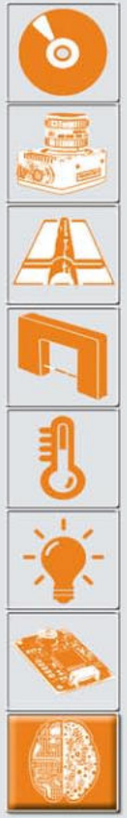
Interest aroused?

Visit the

EyeCademy
powered by EVT

EVT Eye Vision Technology
Gartenstraße 26, 76133 Karlsruhe, Germany
Tel.: +49 721 668 004 23 0
info@evt-web.com
www.evt-web.com

- Surface Inspection
- Object recognition
- Gesichtserkennung
- Defect detection
  E.G.: Wafer, Filament
- NPA Recognition & Reading
- Transfer Learning
- Onside Training
- Skeletonization
- Make & Model
- OCR Reading
- Classification



Deep Learning in Image Processing

Deep Learning is used in image processing for optical quality assurance whenever the object to be inspected occurs in different variations that are difficult to detect. In this case, classical image processing does not detect occurring errors. The advanced Deep Learning components of ***EyeVision*** are the solution here. These Deep Learning components enable easy and fast training. Due to the Deep Learning accelerator, the Deep

Advantages of Deep Learning

- Fatigue-free and precise
- Extremely powerful
- Reliable
- Object recognition even under non-optimal conditions
- Quickly ready for use
- Customizable
- Deep Learning Library
- Pretrained networks
- Fully trained networks
- CPU, GPU, Coral, FPGA support

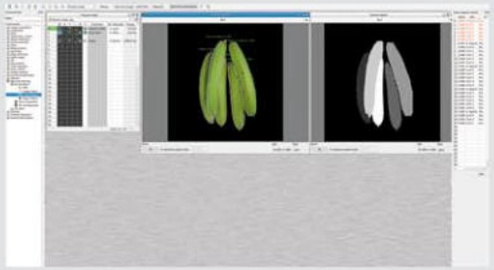
Machine Learning Surface Inspector

- Deep Machine commands
- Full integration into the ***EyeVision*** software
- Will be extended and enhanced continuously
- Adapted to the latest Machine Learning methods for machine vision requirements
- The tool can be used in any ROI which e.g. uses the size of the anomaly as a quality criterion for surface defects.

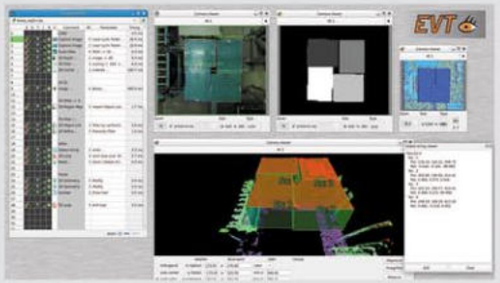
Number Plate Recognition

Face Recognition

Food Detection



De-Palletizing



Application fields:

Identify
Incoming goods inspection

Mount
Instruction of employees in production

Control
Quality control

Picking
Outgoing goods inspection

Measuring
Inspection
Check
Skeletonize
Positioning
Traffic control
Machine Learning
Test for completeness
Attendance control
Component inspection
Surface inspection
Number plate reading
3D matching
3D Vision
Robot vision
Coplanarity
People entry control
Contour inspection
Contamination test
Defect detection
OCR / OCV
Barcode reading
DMC & QR Code reading
Thread inspection
Paper inspection
Plastic inspection
Metal inspection
Display inspection
Pattern matching
Blister inspection
Semiconductor industry
Food industry
Electrical industry
Pharmaceutical industry
Transport & Logistics
Stamping industry
etc.