Building your Artificial Intelligence Solutions
AI Vision Toolset

**Input**
- Images
- Video Streams
- Thermal Images

**Output**
- Alerts
- Statistics
- API
- GMP compliance database

**Features**
- RAYPACK.Ai Vision Tools SDK
- Object Detection
- Quality Control
- Surveillance

**Deep-Learning Framework**
Visual Analytics in 4 Steps

1. GRAB IMAGE OR VIDEO
2. ANNOTATE
3. TRAIN YOUR NETWORK
4. ASSIGN ACTION
Introducing AI CAM for Flexible Quality Control
AI Visual Inspection

Problem
- Production of exhaust pipes requires perfect welds
- **BUT:** to examine every weld prior to fusion is non-economic
- Results in high scrap rates after final quality control

RAYPACK AI-Cam is able to recognize faulty welds upfront

- Non-invasive installation on-site with existing camera system
- Easy to train neural network
- Defect detection with more than 90% accuracy
QA on Electronic Boards

Automated localisation on lacquer on electronic boards

Labeling

Input: Foto

Detection Board

Detektion Lacqure areas

VISION TOOLS
Anonymized Person Counting

- Device no longer functions as a camera, but as a sensor
- The identity of the person is not recognized
  → Only the quantity of people is registered
Anonymized Person Counting
Food Freshness

- Image of the recording is visible
- Inclusion of persons in the recording is possible
- Device functions as a camera
Fasion Detection
Signage Analysis

Reference

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<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>total images, 654</td>
</tr>
<tr>
<td>2</td>
<td>correct images, 92.65% (506)</td>
</tr>
<tr>
<td>3</td>
<td>false images, 7.33% (48)</td>
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<tr>
<td>4</td>
<td>threshold, 0.89</td>
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</tbody>
</table>

Wrong Signages

Correct Signages
Parking Lot Observation

![Parking Lot Observation Image]
Standard Face Detection / 45 Faces detected
Raypack Face / > 600 Faces detected
RAYPACK Face AI

**Input**

- Face Detection
- Face Recognition
- Emotion Detection
- Demographics

**Output**

- {Person: Lionel Messi ...
- {happy: 0.9703, smiling: 0.9502 ...
- {age: 31, gender: male, culture: white, 

Statistics

API
Verification of Passports
Raypack Pose
Gustav

- High-performance - low-power
- 256 GPU cores
- Up to 1000 GB internal Memory
- Optional LTE module
- powered by NVIDIA Jetson
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