

# Building your Artificial Intelligence Solutions



aiso-lab

# AI Vision Toolset



## Input



Images

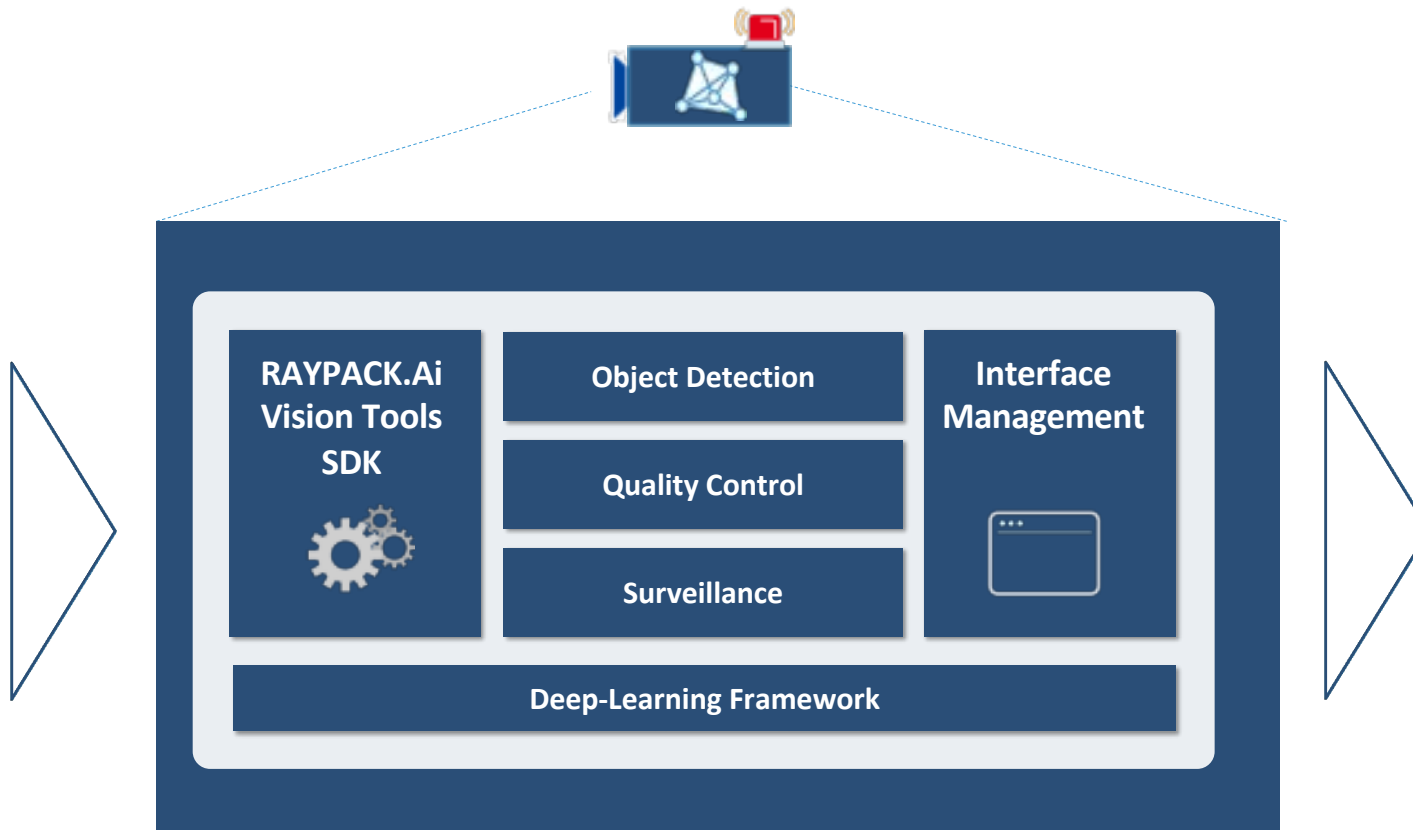


Video Streams



Thermal Images

6/1/19  
Slide 2



## Output



Alerts



Statistics



API



GMP compliance  
database

# Visual Analytics in 4 Steps



1



2



3



4



**GRAB IMAGE OR  
VIDEO**

**ANNOTATE**

**TRAIN YOUR  
NETWORK**

**ASSIGN  
ACTION**

# RAYPACK.AI



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

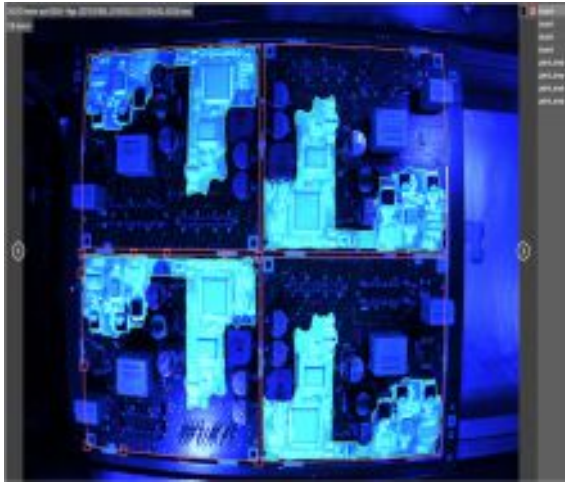
## RAYPACK AI-Cam is able to recognize faulty welds upfront

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

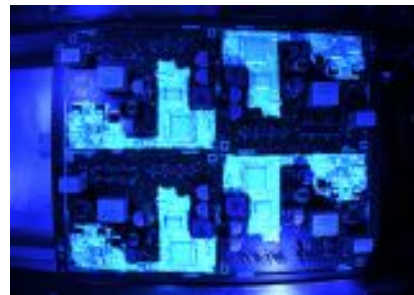
# QA on Electronic Boards

## Automated localisation on lacquer on electronic boards

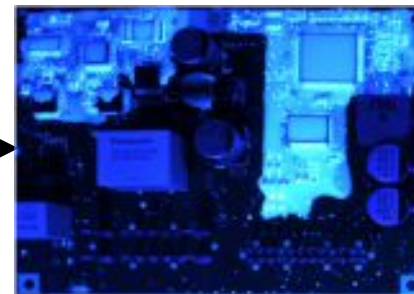
Labeling



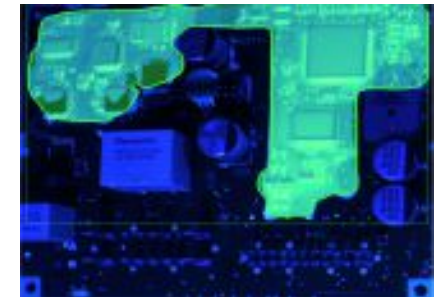
Input: Foto



Detection Board



Detection Lacquire areas



**VISION TOOLS**

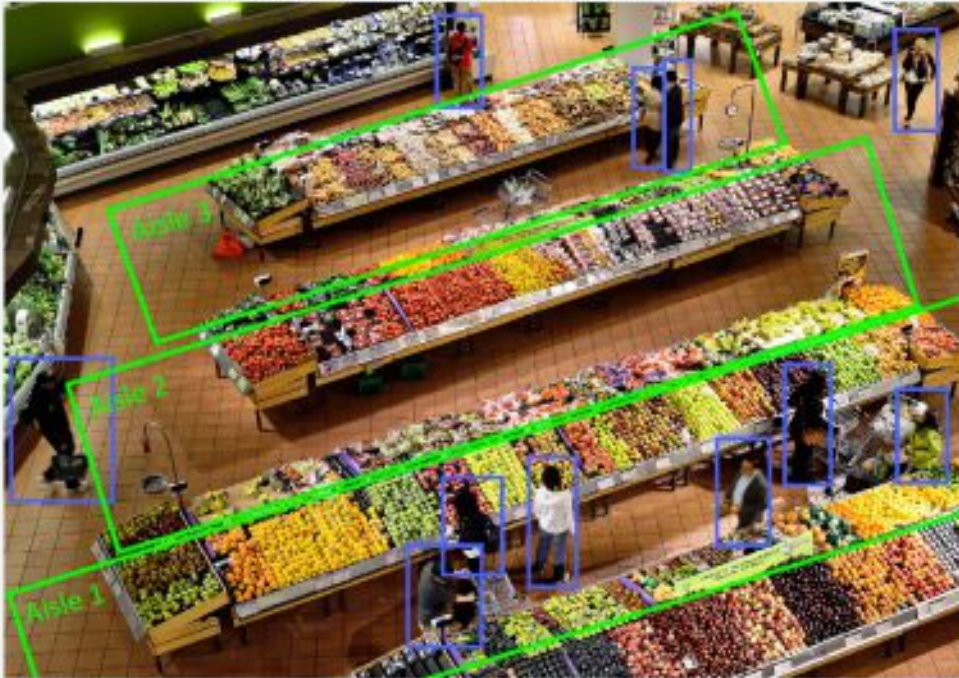
# Anonymized Person Counting



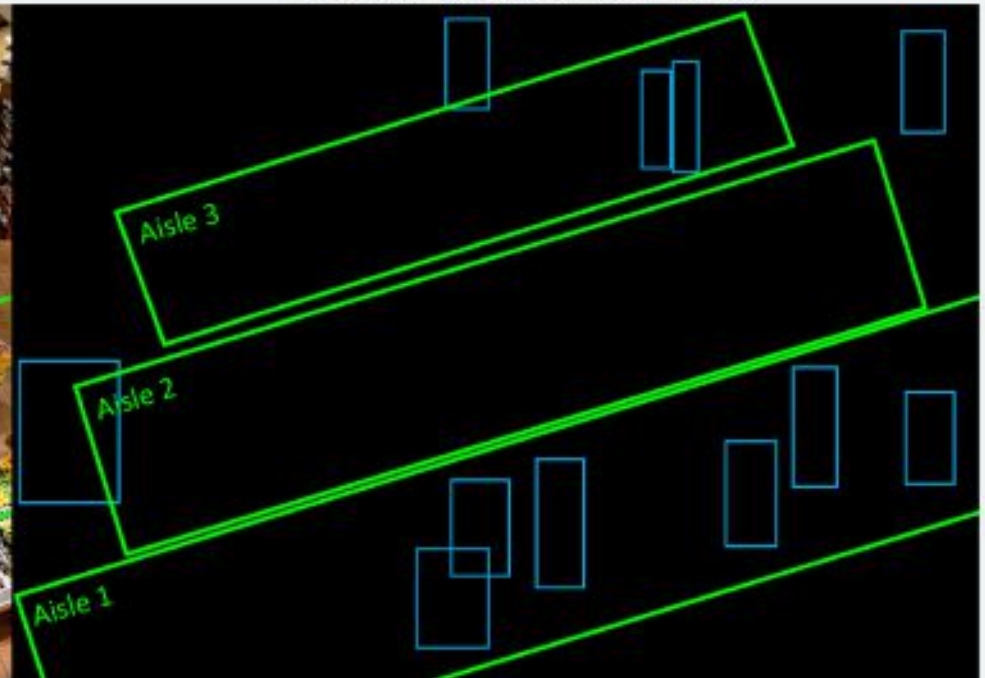


# Anonymized Person Counting

Recording before data filtering



Recording after data filtering





# Food Freshness



Recording before data filtering

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

# Fasion Detection

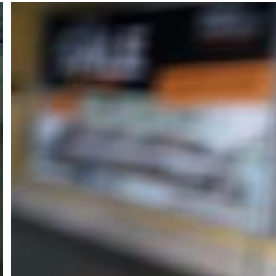


# Signage Analysis

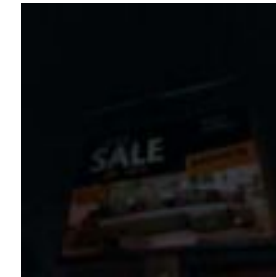


Reference

1	total images,654
2	correct images,92.66% (606)
3	false images,7.3% (48)
4	threshold,0.89
5	
6	
7	



Wrong Signages



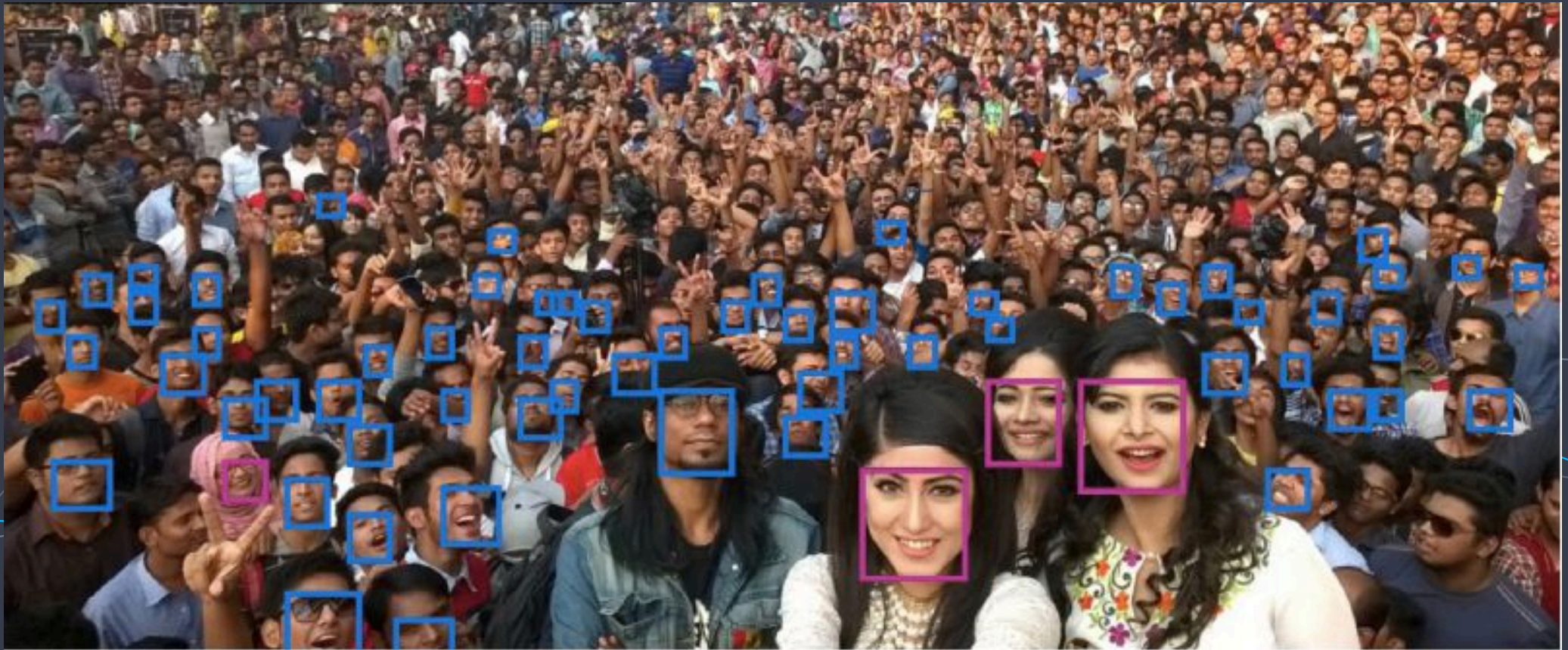
Correct Signages



# Parking Lot Observation

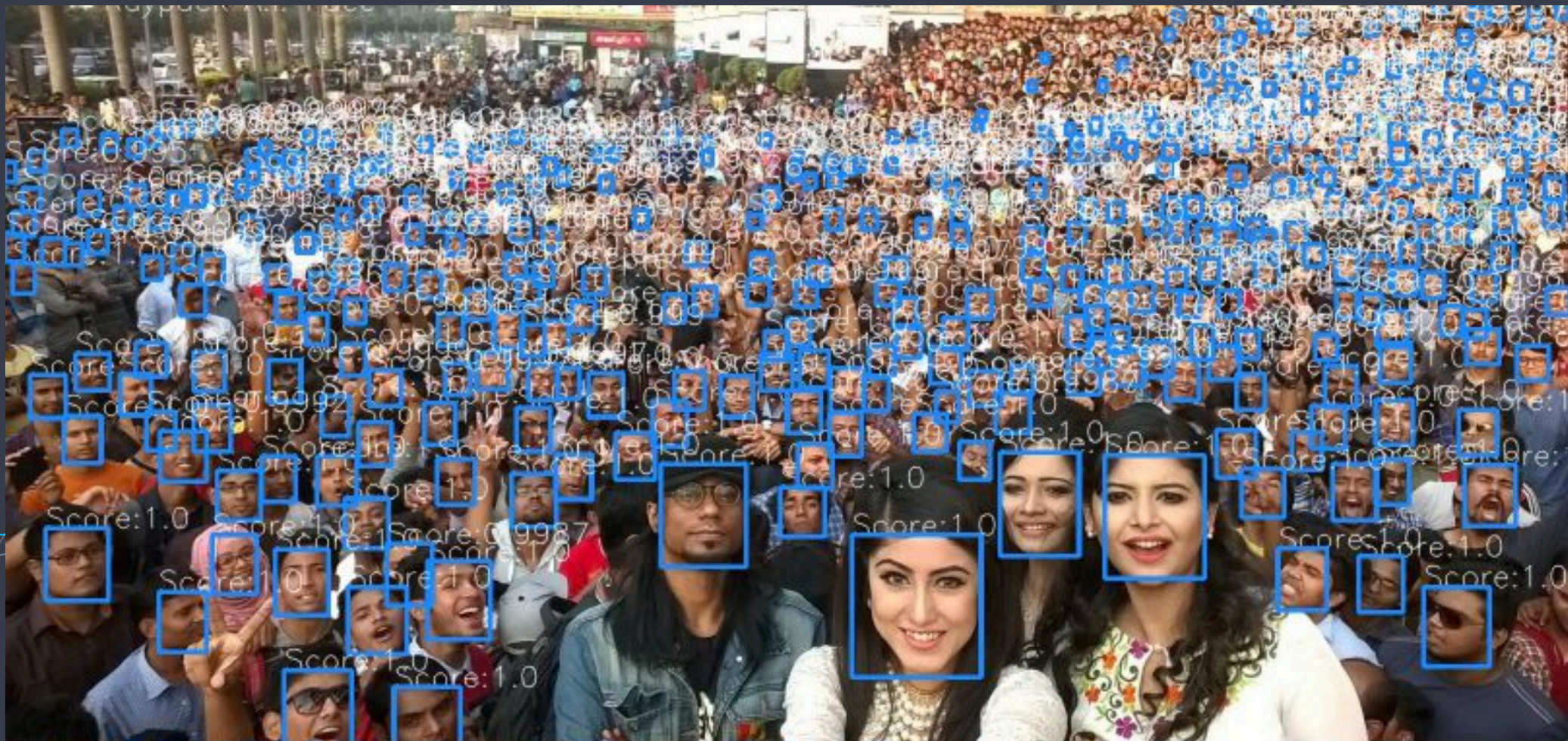


# Standard Face Detection / 45 Faces detected





# Raypack Face / > 600 Faces detected







# RAYPACK Face AI



## Input



### Face Dectcion



### Face Recognition



### Emotion Detection



### Demographics



## Output

```
{  
  Person: Lionel  
  Messi  
  ...,  
}
```



Statistics

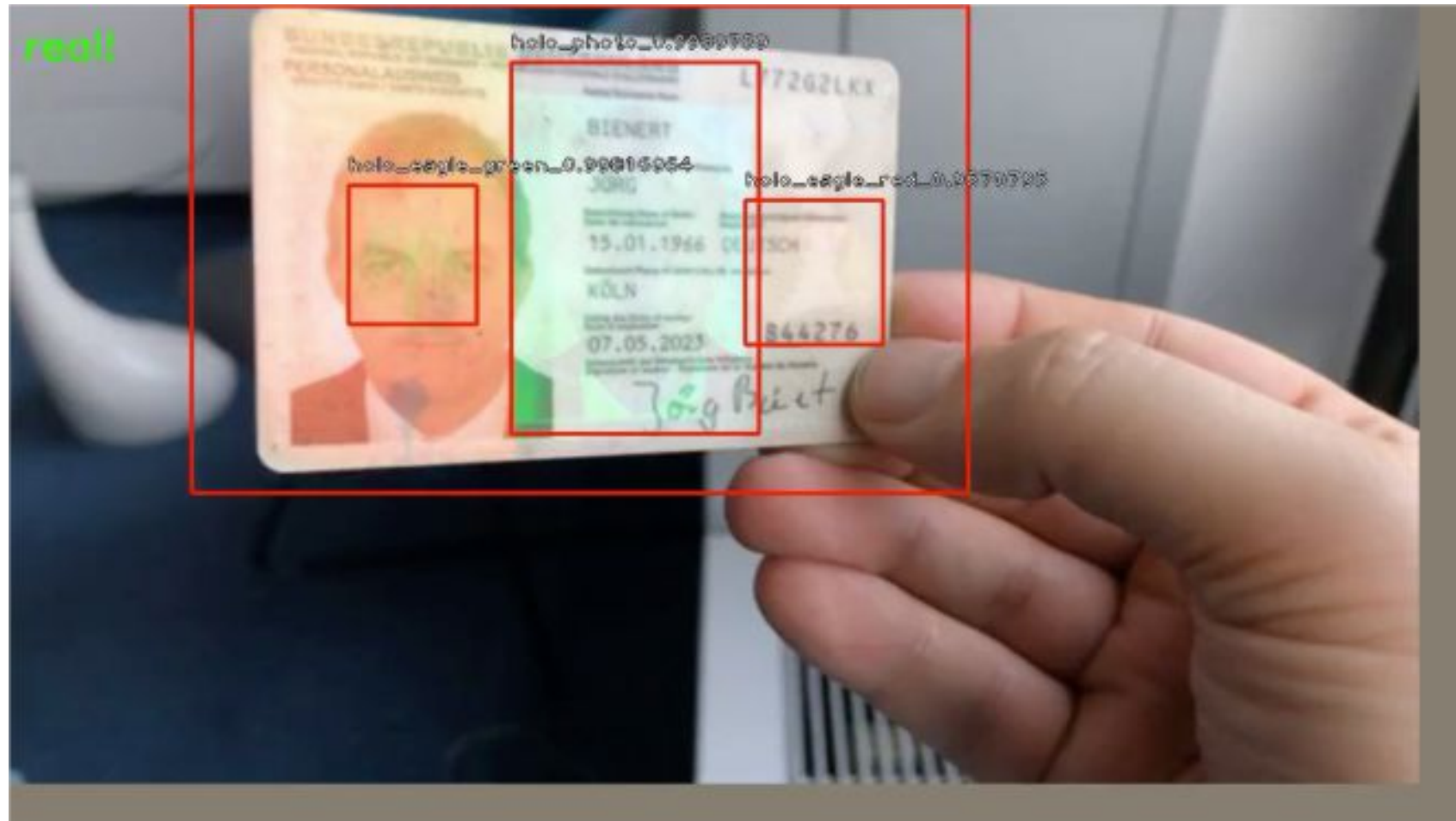
```
{  
  happy: 0.9703,  
  smiling: 0.9502  
  ...,  
}
```



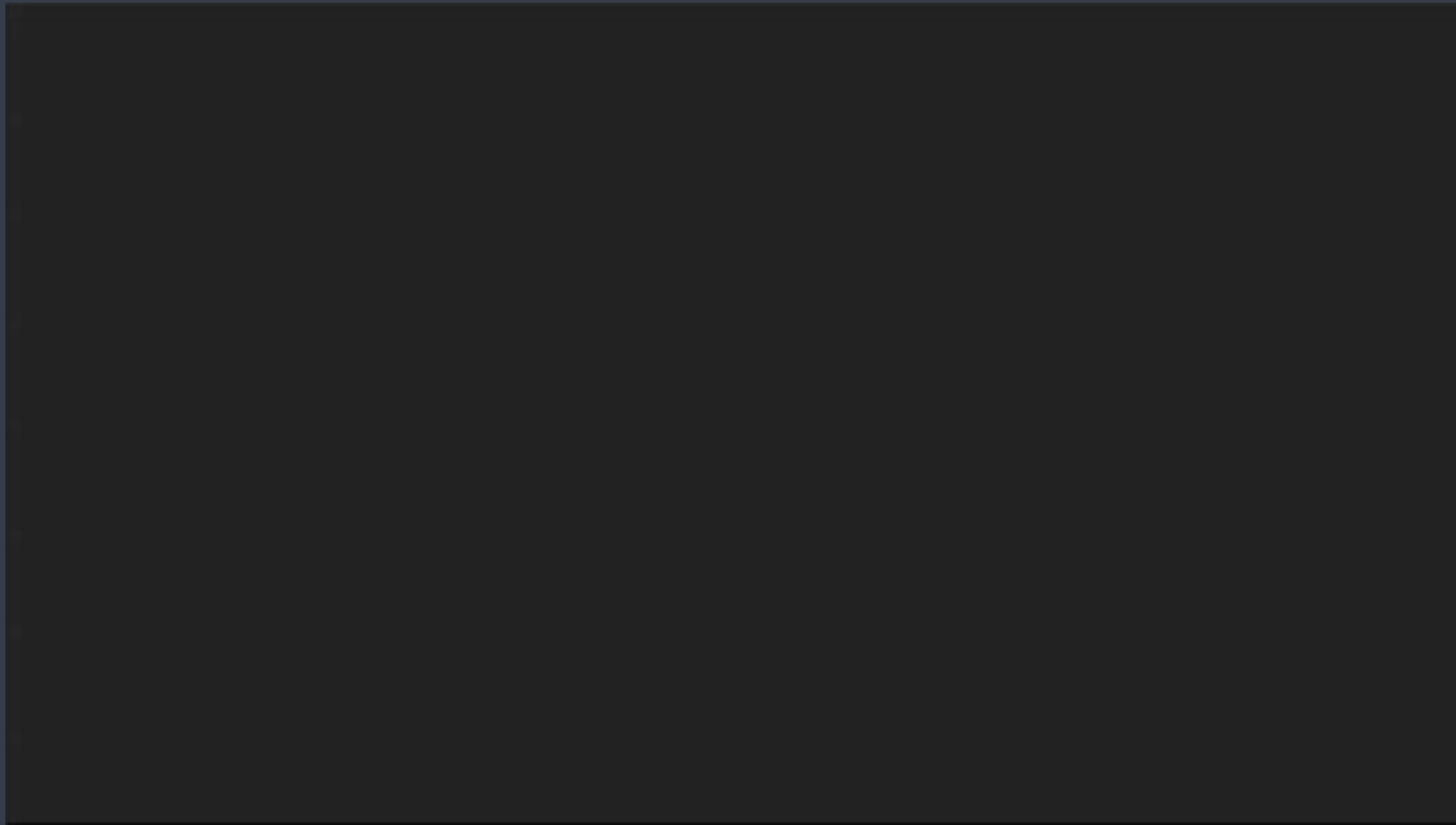
```
{  
  age: 31,  
  gender: male,  
  culture: white,  
}
```



# 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



# Building your Artificial Intelligence Solutions

A stylized graphic of a human brain, split vertically. The left half is light blue with white circuit-like lines. The right half is dark green with white dots, resembling a circuit board or neural network. The brain is centered behind the main title text.

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