

SOLUTIONS FOR ADVANCED MACHINE VISION PROJECTS

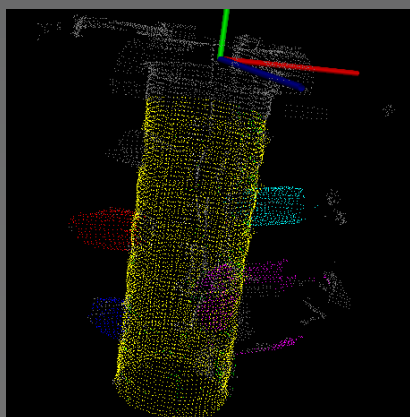
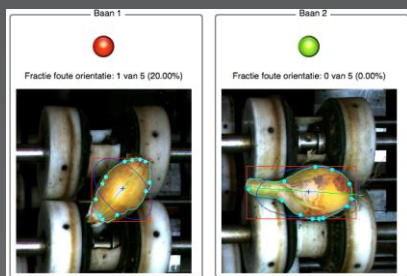
WHO WE ARE

Yazzoom is a software and engineering company specialized in industrial process improvement and the development of algorithms for data analytics and vision by machine learning and artificial intelligence for all application domains.

HOW WE WORK

Our multi-talented engineering team has the capacity and takes the time to understand our customer's needs and their processes.

We offer great flexibility, delivering the optimal integrated solution.



OUR EXPERTISE

- **3D AND THERMAL VISION** – Full tri-dimensional reconstruction from all types of 3d cameras for measurement and matching, processing and analysis of images from infrared cameras.
- **VISION-BASED PROCESS CONTROL** – Thanks to our expertise in advanced process control and process engineering, we integrate machine vision and real-time process optimization in addition to quality control. For more details look at the back of this flyer.
- **INSPECTION AND SORTING OF NATURAL PRODUCTS & IN UNCONTROLLED ENVIRONMENT** – We are experts at image analysis in hard conditions, for example vegetable shape inspection on a dirty conveyor, or taking color 3D images inside a sewer from a mobile robot.
- **SENSOR SELECTION AND DATA FUSION** – “If the only tool you have is a hammer, you treat everything as if it were a nail.” Thankfully our toolbox doesn't stop at cameras. We also have extended knowledge of all kinds of other industrial sensors and can combine the data from multiple sources to get the most efficient solution.
- **ARTIFICIAL INTELLIGENCE & DATA ANALYTICS** – Standard vision and classification algorithms are not always adequate for solving complex applications. Our data science and artificial intelligence skills allow us to develop custom algorithms tailored to customer's needs. We can also couple machine vision data to root causes analysis of defects and anomaly detection algorithms that help predict failures.



SMART SUPERVISORY COMPUTER VISION



Adapts to changes
by design



Real time
process optimization



Solves complex
problems



Improves quality
and productivity



STANDARD COMPUTER VISION



Designed to detect
change



Alarm if problem
or defect



For simple tasks like
QC, presence control...



Helps personnel
tune the process

Standard machine vision applications are used to check quality or presence and generate an alarm or send a signal to an actuator when a defect or problem is detected. Changes to the process parameters to avoid future bad quality or defects are usually done offline, manually.

When needed, **We go one step further** and derive process parameters from measurement made on industrial camera images, but also integrate other sensor and process data.

Predictive models and artificial intelligence algorithms detect anomalies and process drift in pictures and sensor data and adapt the right process parameters before the problems ever occur.

The result is automated tuning of production variables - supervisory control - in real time to **optimize product quality and avoid problems and defects** as much as possible.

It also improves operational efficiency and productivity and reduces downtime.