COMPUTER VISION

Automatic Data Collection via AI-supported Image Data Analysis

With the help of AI-driven systems, companies can leverage unprecedented visibility and analytics to make data-driven decisions. Computer Vision represents a valuable tool for companies in the manufacturing, logistics and warehousing industries.

The technology makes it possible to analyze complex visual data, recognize patterns, track movements and monitor inventory in real time. For example, cameras can be installed at the gates in incoming and outgoing goods that have a view of the load, e.g. pallets. 1D or 2D barcodes are applied to the goods and the cameras read the content of the code when movement is detected.

The AI checks and verifies which is the correct barcode and merges it with the associated information from the WMS database. The system creates the relevant processes and transactions in the background.

With Computer Vision you eliminate error-prone, manual scanning processes and in return you get complete process transparency and efficiency. ICS integrates the intelligent AI-supported application into higher-level IT systems, such as the cloud-capable warehouse management system „Stradivari® WMS“. Process analysis, software, hardware and lifecycle services are all provided by a full-service system integrator with international project experience.

Installation of cameras at goods receipt and goods issue

video stream

AI Computer Vision backend service

Data exchange WMS database API-WebServices

Information sent to forklift terminal

Computer Vision automates process steps in the background...

Implementing Computer Vision in the warehouse offers a variety of benefits. This technology allows manual process steps to be eliminated when goods are received and dispatched, resulting in increased efficiency and accuracy.

A major advantage is that the system automatically recognizes which transport orders need to be created for the respective goods. By accessing the database, relevant information such as orders, shipping notifications and storage locations are automatically retrieved. This enables seamless integration into warehouse operations and ensures that the right steps for transporting the goods are generated without the need for manual intervention by employees.

The automatic creation of transport orders saves time and reduces potential sources of error. The system recognizes the connection between the scanned goods and the corresponding transport order, which leads to smoother order processing. This minimizes delays and makes the entire logistics process more efficient.

In addition, Computer Vision enables greater accuracy when scanning and identifying goods. The automatic collection and evaluation of visual data minimizes human errors and optimizes inventory management in a process-reliable manner.

...and thus replaces manual steps during loading / unloading.

Goods Receipt

- **No** manual scanning and comparison with order notifications
- **No** generation of the transport request
- **No** rescanning for confirmation

Goods Issue

- **No** scanning when picking the goods
- **No** manual scanning and checking of the loading location
- **No** rescanning to confirm

Features

- Recognition of multiple barcodes & QR codes on an image or video stream
- Identification of relevant barcodes (customizing)
- Optical processing of the identified relevant barcodes (minimization of bandwidth + better readability)
- Capturing up to 30 barcodes per second
- Queuing of the barcodes for transfer to the interface system / feedback
- Recording of forklifts / relevant objects in warehouses is possible
- Scalability: multiple cameras increase capture capacity

The ICS Group looks forward to speaking with you!

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