Press release

AI supported image processing in bin picking

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**From point cloud to picking**

In the new version of its bin picking software LHRobotics.Vision, Liebherr-Verzahntechnik GmbH relies on artificial intelligence (AI). By filtering irrelevant image data, it detects disordered workpieces faster and more accurately when removing them from the container.

The intelligent software is part of a technology package for bin picking – the robot-assisted removal of unsorted parts from a container. It is available in two functional forms: The basic licence offers collision-free workpiece detection and picking, while the pro licence also offers storage planning. An optional simulation tool allows virtual testing and optimisation – all on an intuitive user interface. Thanks to an open sensor interface, LHRobotics.Vision is compatible with vision systems from a range of different manufacturers.

Precise component recognition with AI

The software includes AI-supported optimization of the search parameters and was named a top innovation in 2023 by the trade magazine inVISION. Nevertheless, position detection remains a challenge, for example, with flat components such as sheet metal, as unevenness in the box floor can make differentiation more difficult. Workpiece recognition has now been further optimized: The AI segments the point cloud captured by the camera, which maps the shape and position of the workpieces, and evaluates the relevance of the data. Irrelevant data on the container bottom or walls are eliminated before further processing. The software then only searches the relevant image segments.

Optimized data structure

“The reduced data volume accelerates workpiece detection, reduces the risk of errors and enables a higher degree of container emptying – even when removing sheets,” explains product manager Sebastian Wendt. The new feature is available as an optional additional function for all versions of LHRobotics.Vision and is compatible with all vision systems.

Photos

Ein Bild, das Farbigkeit, Kinderkunst, Rechteck, Bilderrahmen enthält.

KI-generierte Inhalte können fehlerhaft sein.

Farbe Punktewolke Original.jpg

Image data of the point cloud before AI-supported segmentation  
Ein Bild, das Farbigkeit, Grafiken, Grafikdesign, Screenshot enthält.

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Farbe Punktewolke Segmentiert.jpg

Segmented point cloud with suppressed image data optimizes and accelerates the withdrawal of parts.  
  
  
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