

## MVTec develops exhibits for the Deutsches Museum using state-of-the-art machine vision technologies

- **Demonstrations in the "Robotics" exhibition showcase the diverse applications of machine vision.**
- **Machine vision is a crucial component in modern production.**
- **Munich-based company MVTec Software GmbH has been developing software for machine vision for over 25 years.**

**Munich, February 6, 2024** – The "Robotics" exhibition at the Deutsches Museum in Munich has been expanded by two exhibits since the end of 2023. MVTec Software GmbH ([www.mvtec.com](http://www.mvtec.com)), a leading international provider of machine vision software, has prepared hands-on industrial image processing technology for visitors on behalf of the Deutsches Museum. The two exhibits make the technology tangible and demonstrate its practical applications, especially in industrial settings. "As a Munich-based company, we are proud to support the Deutsches Museum with demonstrations on the topic of machine vision. Our goal is to present the most advanced technologies currently available in industrial image processing to visitors in an engaging and interactive manner. This cooperation underscores the significance of machine vision as a component in automation, especially in addressing the challenges of skilled labor shortages," explains Dr. Olaf Munkelt, CEO of MVTec Software GmbH. One station demonstrates how machine vision teaches robots to "see" and enables them to recognize and locate objects afterwards. The second station visualizes the images captured by a 3D camera and a thermal imaging camera on screens.

### **Exhibits as a collaborative effort of several companies in the machine vision industry**

"During a visit to the 'automatica' trade fair, we got to know MVTec as an innovative company working in image processing for robotics. This made it clear to us that we should approach them when we wanted to showcase the theme 'What and how does a robot see?' in the exhibition. Their response immediately signaled willingness and enthusiasm for the somewhat unusual task, which is also evident in MVTec involving its partners. This enthusiasm persisted throughout the entire development period. We are very pleased to have found MVTec as a reliable partner and to be able to introduce the theme of machine vision to our visitors through the two hands-on stations," says Dr. Frank Dittmann, the exhibition's curator.

The "Robotics" exhibition at the Deutsches Museum showcases the use of robots in various applications on multiple themed islands: in healthcare and medicine, in households, for play and learning, and in industry. The engineers at MVTec tasked with developing the exhibits aimed to showcase the diversity of machine vision applications. One demonstration shows visitors what machine vision can enable robots to do. For this purpose, a playfield with objects is set up. Visitors can place objects under a camera, and with the help of state-of-the-art

technologies, including artificial intelligence (AI), the objects are identified. Their positions are then displayed on a screen on the playing table. These methods enable robots, for example, to autonomously find and pick up objects, such as in pick & place tasks. The second hands-on station illustrates how industrial image processing software processes and visualizes the signals it receives from 3D and thermal imaging cameras. Visitors can stand in front of the cameras and experience live how their body heat is colorfully displayed on screens. Similarly, with 3D cameras, visitors can stand in front of the camera, and a screen shows the spatial differences or dimensions.

A machine vision application consists of many components – this also holds true for the exhibits at the Deutsches Museum. The ability to visit these exhibits is made possible thanks to the support of several companies in the machine vision industry. Basler AG provided a 3D ToF camera, the thermal imaging camera came from Teledyne FLIR LLC, IDS Imaging Development Systems GmbH contributed a 2D camera, and Falcon Illumination MV GmbH & Co. KG, an expert in lighting solutions, provided the LED barlights. MVTec developed the demonstrations and also provides the machine vision software used.

### **Industrial image processing as a hidden champion in automation.**

Automation and digitization are making their way into an increasing number of industries. Machine vision is a key technology often referred to as the "eye of production," as it keeps a close watch on all processes related to manufacturing and logistics. Machine vision applications require hardware and software components. Hardware includes image acquisition devices, which are cameras or sensors that generate large amounts of image data. The processing of images is handled by machine vision software, which analyzes the data and makes the results available for further use. Various methods and technologies are available for this purpose, with deep learning, a branch of artificial intelligence, offering exciting and entirely new application fields. Machine vision applications include quality assurance, completeness checks, measurements, and process monitoring, among others. MVTec Software GmbH is one of the world's leading international software providers for industrial image processing and has played a significant role in driving the technological development of the industry. The company, founded in Munich in 1996 as a spin-off from the Technical University of Munich and the Bavarian Research Center for Knowledge-Based Systems (FORWISS), has its headquarters in Munich, Germany, with offices in Boston (USA), Lyon (France), and Kunshan near Shanghai (China), as well as an established international sales network in more than 35 countries.

Image source: Hubert Czech, Deutsches Museum

# Press release



## **About MVTec Software GmbH**

MVTec is a leading manufacturer of standard software for machine vision. MVTec products are used in a wide range of industries, such as semiconductor and electronics manufacturing, battery production, agriculture and food, as well as logistics. They enable applications like surface inspection, optical quality control, robot guidance, identification, measurement, classification, and more. By providing modern technologies such as 3D vision, deep learning, and embedded vision, software by MVTec also enables new automation solutions for the Industrial Internet of Things aka Industry 4.0. With locations in Germany, the USA, France and China, as well as an established network of international distributors, MVTec is represented in more than 35 countries worldwide.

[www.mvtec.com](http://www.mvtec.com)

## **Press Contact MVTec Software:**

MVTec Software GmbH  
Press Requests  
Arnulfstraße 205  
D-80634 München  
Phone: +49 (0)89-457695-0  
Email: [press@mvtec.com](mailto:press@mvtec.com)  
Web: [www.mvtec.com](http://www.mvtec.com)

Schwartz Public Relations  
Tobias Möldner  
Sendlinger Straße 42 A  
D-80331 München  
Phone: +49 (0)89-211 871 -31  
Email: [mvtec@schwartzpr.de](mailto:mvtec@schwartzpr.de)  
Web: [www.schwartzpr.de/en](http://www.schwartzpr.de/en)