

MVTec Software GmbH implements technology from in-house research department in new version of machine vision software MVTec MERLIC

- **MVTec research department wins Best Industrial Paper Award at the International Conference on Computer Vision Theory and Applications on the topic of 3D Anomaly Detection using deep learning.**
- **Results of the research department provide valuable impulses to the worldwide machine vision research community and are also incorporated into MVTec's software products.**

Munich, October 27, 2022 – MVTec Software GmbH (www.mvtec.com), a leading international manufacturer for machine vision software, released the new version 5.2 of its easy-to-use image processing software MERLIC on October 20, 2022. With MERLIC, users can quickly and easily develop complete machine vision applications even without programming knowledge. The focus on ease-of-use and the simultaneous provision of the latest technologies do not contradict each other. On the contrary: MERLIC is proof that the latest and most powerful machine vision technologies, such as deep learning, can also be used with little effort and know-how. The now released version MERLIC 5.2 includes the deep learning technology "Global Context Anomaly Detection". Six months ago, the method, which is a world first in this form, was integrated for the first time in MVTec HALCON, the standard software for machine vision. Subsequently, the technology was adapted to MERLIC's user experience concept, which requires no programming knowledge, and integrated into the software. Global Context Anomaly Detection, as an extension to the proven Anomaly Detection, takes deep-learning-based defect detection to a new level. The feature "understands" the logical content of images and thus detects new variants of anomalies. One example is determining whether the logo on a bottle matches the bottle's contents.

MVTec research department wins "Best Industrial Paper Award"

The deep learning technology "Global Context Anomaly Detection" was developed by MVTec's in-house research department. In addition, the results of the research work of the roughly one dozen scientists at MVTec are regularly submitted as scientific papers at international conferences. Worth mentioning in this context is the article "The MVTec 3D-AD Dataset for Unsupervised 3D Anomaly Detection and Localization", which opens the door to a completely new kind of anomaly detection. It describes anomaly detection on 3D surfaces. This publication won the Best Industrial Paper Award at the 17th International Conference on Computer Vision Theory and Applications this year.

Customers benefit from the latest technologies

Global Context Anomaly Detection is not the first method developed in MVTec's research department that turns into a market-ready feature. "The rapid provision of research results for the MVTec products HALCON, MERLIC or the MVTec Deep Learning Tool underlines our ambition to be a technology leader. In turn, our customers benefit from using MVTec software products by always being able to work with the latest and most powerful technology in their applications," explains Dr. Maximilian Lückenhaus, Director Marketing + Business Development. The added value for the customer from using Global Context Anomaly Detection lies in the fact that, among other things, completely new application areas can be addressed with machine vision. Examples include quality control for completeness checks, or defect detection, for example on printed circuit boards.

In addition, the research department makes a valuable contribution to the machine vision research community. One example is the "MVTec Anomaly Detection" dataset. This is the first large machine vision dataset for industrial anomaly detection that MVTec is providing free of charge to the research community for non-commercial purposes. This dataset is attracting a lot of attention. Various articles from MVTec dealing with this topic have already been cited thousands of times in the scientific literature.

About MVTec Software GmbH

MVTec is a leading manufacturer of standard software for machine vision. MVTec products are used in all demanding areas of imaging: semiconductor industry, surface inspection, automatic optical inspection systems, quality control, metrology, as well as medicine and surveillance. 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, and China, as well as an established network of international distributors, MVTec is represented in more than 35 countries worldwide. www.mvtec.com

About MVTec MERLIC

MVTec MERLIC is an all-in-one software product for quickly building machine vision applications without any need for programming. It is based on MVTec's extensive machine vision expertise and combines reliable, fast performance with ease of use. An image-centered user interface and intuitive interaction concepts like easyTouch provide an efficient workflow, which leads to time and cost savings. MERLIC provides powerful tools to design and build complete machine vision applications with a graphical user interface, integrated PLC communication, and image acquisition based on industry standards. All standard machine vision tools such as calibration, measuring, counting, checking, reading, position determination, as well as 3D vision with height images are included in MVTec MERLIC. Furthermore, the software is able to execute tools in parallel, increasing overall efficiency and improving the implementation of multi-camera-setups. MERLIC's features are all based on the latest state-of-the-art machine vision technologies, such as matching or deep learning. The software is available for Windows-based PC and embedded platforms, making it ideally suited for use in smart cameras. www.merlic.com

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