

PRESS RELEASE

AI makes imaging applications easier and faster Intelligent features support from capture to output

Frankfurt Main, April 14, 2018 - From intelligent automatic image enhancement to the first self-recording cameras, innovative new features and devices bring a breath of fresh air to the imaging scene. "Artificial intelligence is increasingly being used in imaging applications for professional and amateur photographers and opens up many new opportunities", says Christian Müller-Rieker, Executive Director of the Imaging Association (PIV), explaining the current innovation trend. For professionals, the support of intelligent features brings a speed and convenience advantage, for amateurs it makes applications much easier and more comfortable. It also opens up new target groups, to whom photographing, image processing or output has so far seemed too laborious or difficult.

AI use in different areas

The fields of application for AI are manifold: they begin with the automatic recognition of a picture's contents, which was still impossible just a few years ago. However, today it is not only possible to determine which motif is depicted, but even to recognize at which location a photograph was taken, all without human intervention. Characteristic features should make that possible, even if GPS position data is not available. In addition, a pictured person and even his emotions can be identified. The combination of these capabilities makes it possible to create albums automatically for specific topics or to find photos of specific people, places or events. Tedious manual indexing is eliminated and relevant images can be found faster.

Self-photographing cameras that use AI to extract relevant photos from a video stream also rely on the automatic recognition of humans, animals and emotions. If these are known, it is only a small step from a half-hour video footage of a baby to filtering out pictures in which the toddler smiles head-on, for example.

However, AI-supported image recognition plays a role not only in the field of classical photography. It will revolutionize other areas of the imaging ecosystem, such as imaging in medicine. Systems that automatically evaluate photos of skin lesions and warn doctors of critical changes are already being tested to help doctors diagnose skin cancer.

AI support in image processing

AI support does not stop with interpreting images. If images and relevant subareas are detected, they can also be changed automatically with the aid of intelligent functions. The spectrum is very broad: it starts with perfect cropping and the addition of missing image areas, as is required in retouching for example. In addition, automatic scene-dependent corrections and optimizations can be made. One bonus from self-learning systems is that they can track the user's individual preferences over time and adjust their automatic optimizations accordingly. This is especially interesting for professional photographers, who can thus retain their individual look despite automated processing.

However, the spectrum of possibilities already goes so far that it is also possible to make a montage from several shots automatically, as with group shots where it is nearly impossible to shoot a photo in which everyone is smiling. An AI-assisted image editor composes the smiling faces into a new image from several shots. It is even able to make alienation possible and create a new hairstyle or even take the portrait of a man and create a woman from it, for example. Today the results are already astonishingly realistic and can hardly be differentiated from an image taken directly from an amateur's camera.

Outlook

A photographer is still needed to take the relevant images and to edit them creatively because true creativity is still a human domain. However, there are already recognizable approaches that even here make the advance of algorithms likely to occur. In the project "Inceptionism" by Google, for example, the program "Deep Dream" created independent images of bizarre beauty in 2015 - however more as an unintentional side effect. Since then, the development has progressed rapidly and it is now possible to generate a photorealistic image from the line drawing of a cat.

Artificial intelligence, which is gaining in relevance for the entire imaging workflow from shooting to editing, archiving and output, will be one of the trend topics at the world's leading trade fair photokina in Cologne in September 2018.

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About Imaging Association (PIV):

The Imaging Association (PIV), headquartered in Frankfurt am Main, is the central advocacy group for companies that offer their products and services on the market for photo, video, imaging and image communication. The association stands for the topic "image" holistically and sees itself as an impetus for the further development of the entire industry on a national and international level. Since 1950, the association has been the ideal sponsor of photokina in Cologne, the world's leading trade fair for imaging.