PEKAT VISION

Visual quality assurance with artificial intelligence

PEKAT VISION is a software for industrial **visual inspection** and **quality assurance**. It is based on advanced deep-learning algorithms and neural networks.

It learns to understand the product or material from a set of images. It is then able to **find anomalies**, **detect and classify defects** and **check surface** on materials and objects where current vision systems fail.

1 **PEKAT VISION uses its own proprietary focused-learning algorithm which goes beyond deep-learning.**

Focused-learning works like a human eye. It is able to focus on details and needs only a few images to learn and understand the task. From those same few images, it is able to recognize when an object or material is defect-free and when it is defective.

2 **PEKAT VISION is universal.** It can be used with all kinds of materials such as wood, stone, metal, lacquer, castings, leather, rubber or fabrics.

It does not matter that each product or material is slightly different and it does not matter whether it is difficult or even impossible to describe what is a defect. PEKAT VISION is able to find it anyway.

3 **PEKAT VISION is successful.** It has been developed by PEKAT s.r.o. over a period of two years and it has been constantly improved during this time.
It has already been deployed in various industrial applications and has proven its successful functionality.

4 **PEKAT VISION contains the right set of self-learning tools.** These tools can be combined and interwoven with a scripting code. Our experience has shown that exactly these tools together can tackle practically any vision task in manufacturing.

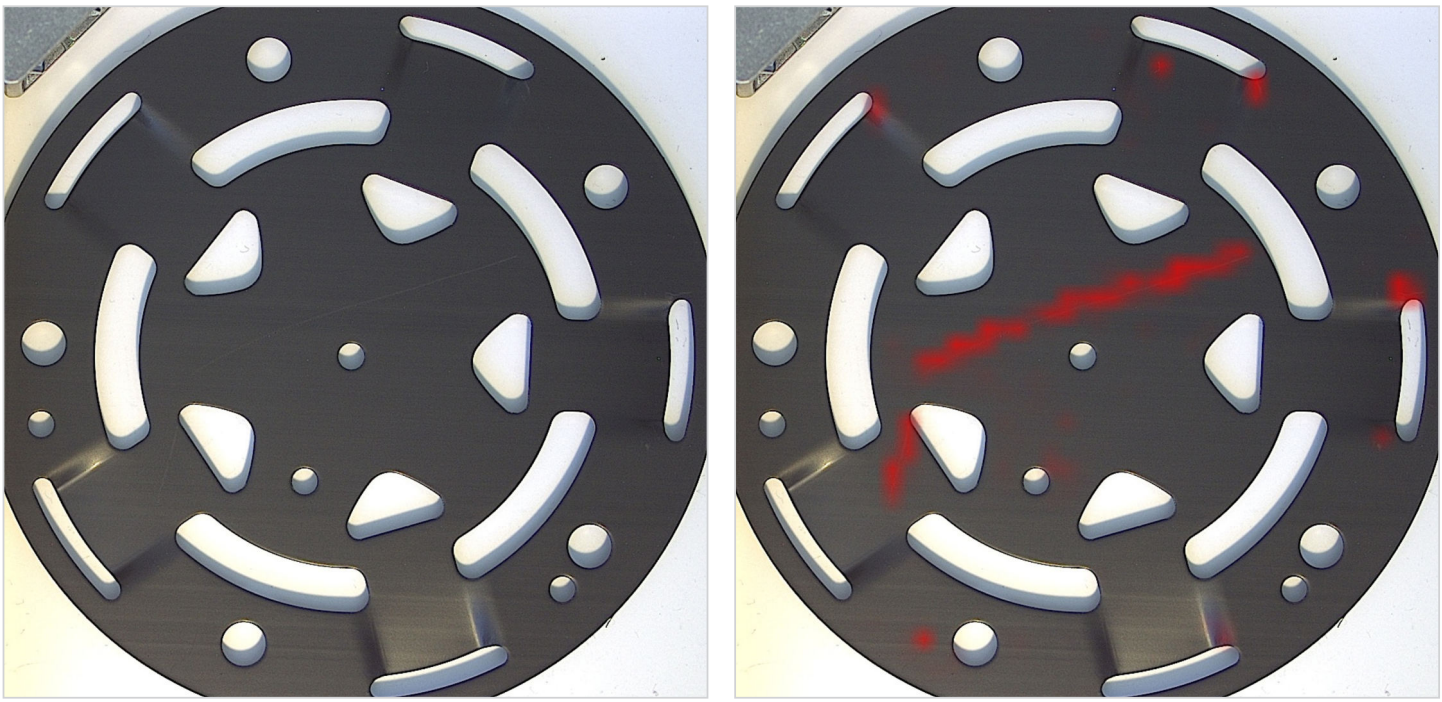
Check videos of examples!

www.pekatvision.com

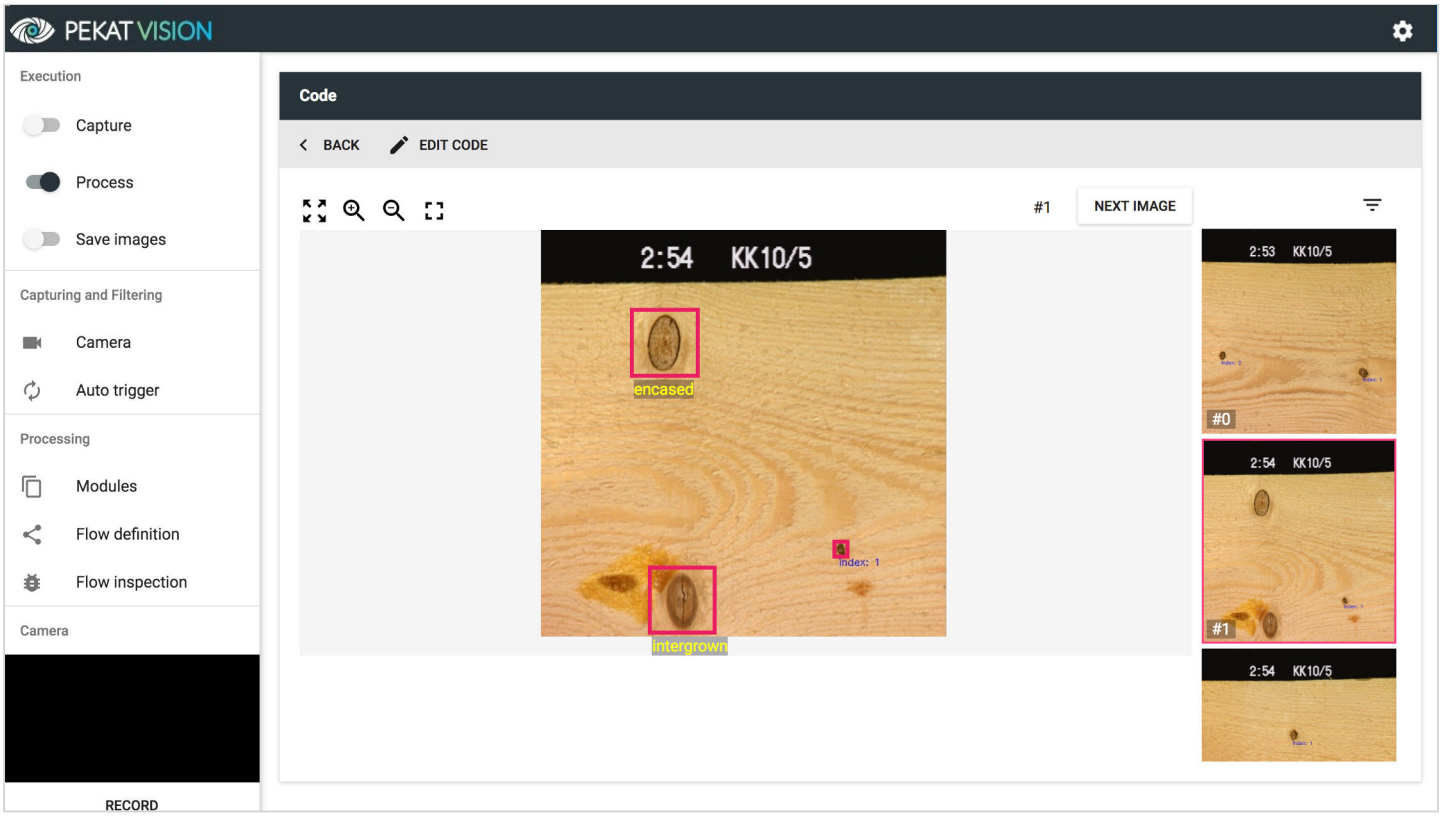
PEKAT VISION
BRAIN BEHIND THE EYE

PEKAT VISION can work in a **supervised mode** – it can be trained to search for a specific defect or surface problem - e.g. scratches, rust, leaks, holes etc.

Screenshot 1 – An example of a trained (supervised) detection of material defects on surfaces – e.g. scratches, rust, holes, leaks, etc.

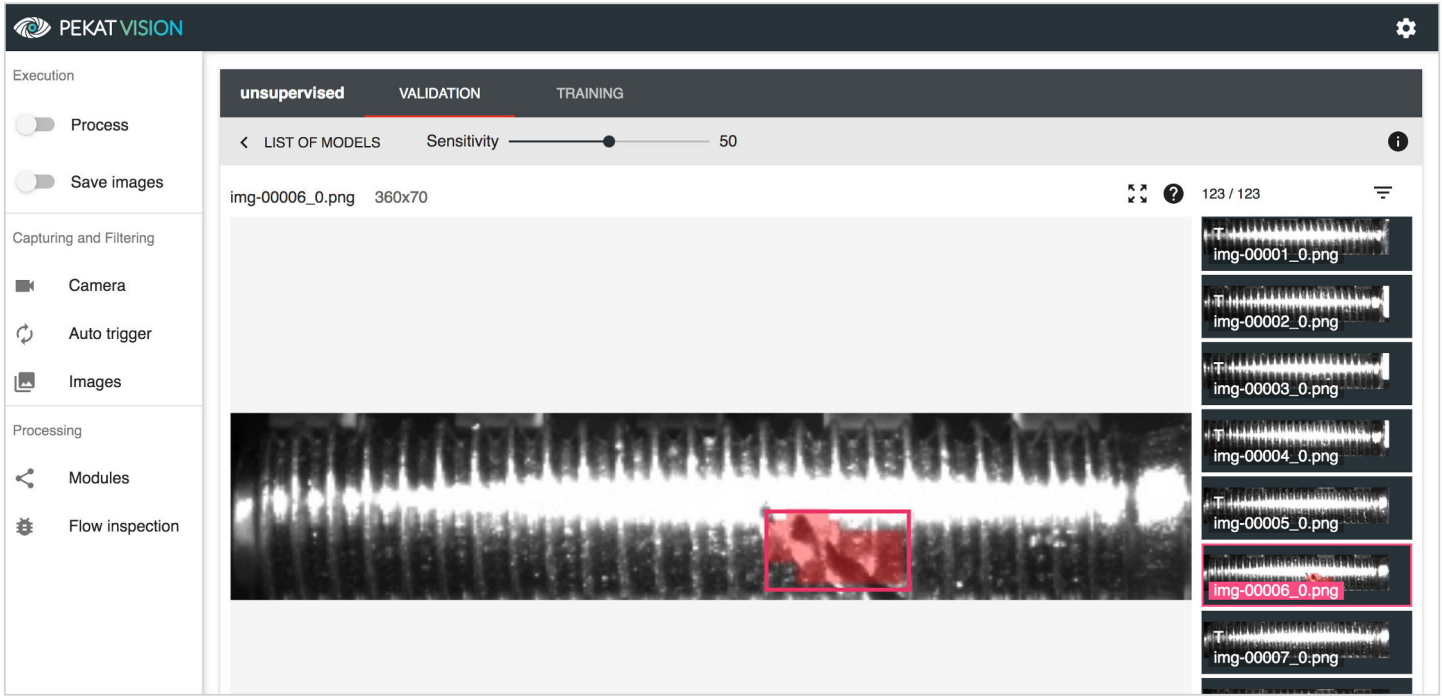


Screenshot 2 – An example of object localization and classification – finding knots and recognizing whether they are intergrown or encased.

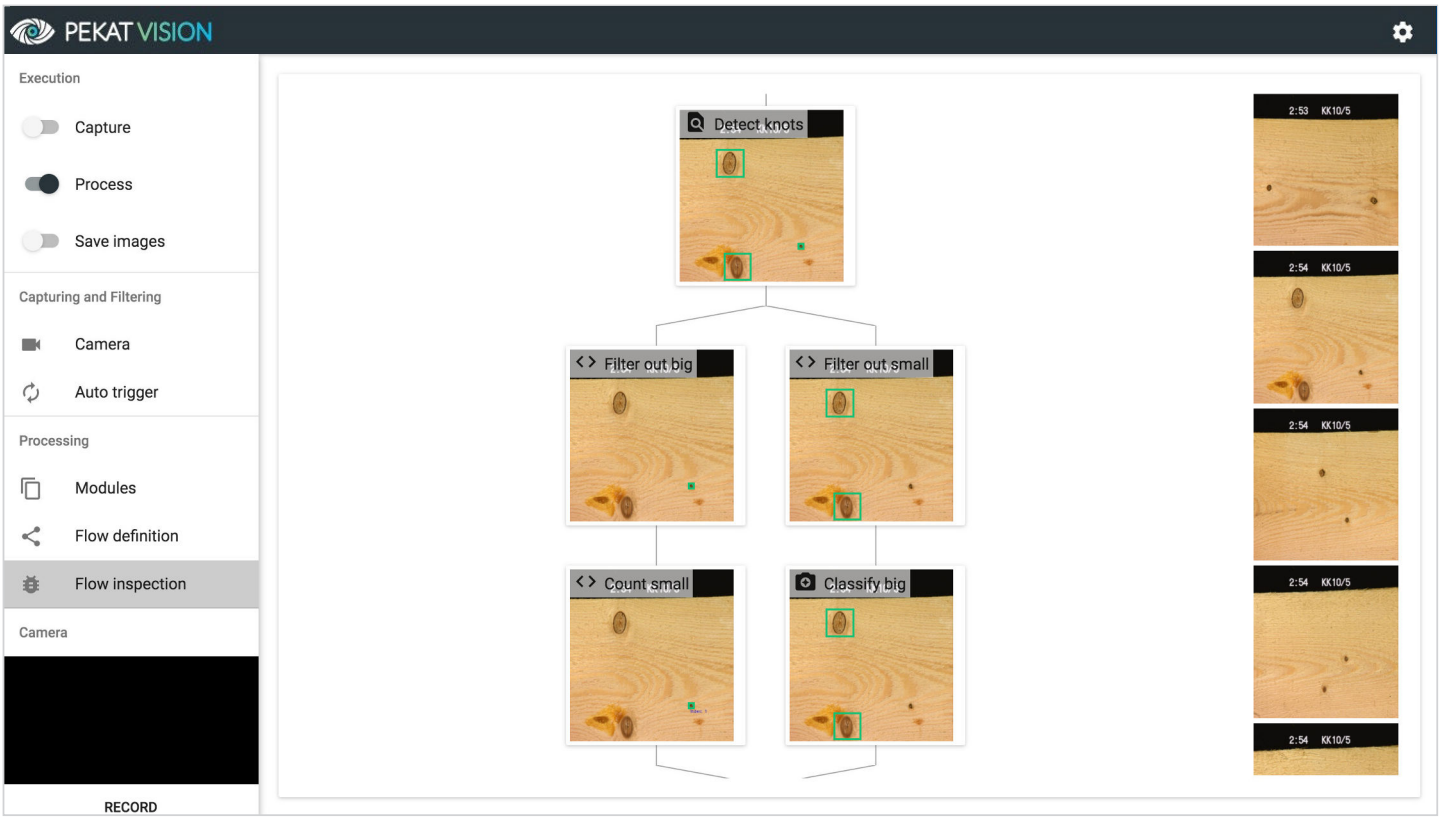


It can also work in a so called **unsupervised mode**. It is then able to find defects which **it didn't see before**. It is even enough to train it on images of defect-free objects or material.

Screenshot 3 – An example of an automatic (unsupervised) detection of material defects with anomaly detection – screw thread.



Screenshot 4 – An example of an automatic (unsupervised) detection of material defects with anomaly detection.



It is only a matter of time before artificial intelligence spreads throughout this sector. We are proud to be **one of the first companies** at the very beginning of this process while providing **superior results**.

As a result, **PEKAT VISION** makes it possible to extend product inspection, **automate quality assurance**, reduce personnel costs and accelerate process cycles, right now.
It contributes to a higher **added value**, bringing proven **cost benefits** which exceed many times the acquisition and implementation costs.

Please refer to our website www.pekatvision.com/videos for various videos showing practical explanations of features and functionalities.

PEKAT s.r.o
Svatopluka Čecha 57
612 00 Brno
Czech Republic

+420 603 598 787
+43 699 192 918 42
team@pekatvision.com
www.pekatvision.com

Check videos of examples!

www.pekatvision.com