



FACT SHEET

KMD Graphics Insight for Market Surveillance

Scale through Machine Learning and Cloud technology



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Public Authorities can scale their market surveillance by leveraging artificial intelligence for screening web shops for unsafe consumer products. The solution can schedule searches of similar pictures of the same product based on one photo and products text. The products found can vary by color or context and the solution will identify the relevant web shops.

The strength in the solution is that it helps bringing Denmark and the European Union up to speed regarding control of the steadily growing online shopping. In this way KMD Graphics Insight can support safe online shopping for 450 million EU citizens.

KMD Graphics Insight supports the process of market surveillance of products sold and marketed. This has been done manually in the past. By using artificial intelligence the solution can find relevant web shops selling illegal products based on a known image or picture and product text. The solution supports the full process of Market Surveillance of Products by Authorities and enables the user to reach broader on the internet and schedule 24/7 searches of products.

- Already now we have indications that AIME can find five times as many pages containing illegal products then we did before, says Lone Saaby, CEO of the Danish Safety Technology Authority.

"We are doing more and more shopping online, and with COVID-19 restrictions and lockdown this trend has really grown. Being able to buy things from around the world with just a few clicks is practical, but it can be hard for the consumer to recognize whether the item they are buying is legal and safe. This creates the need for a protective tool to help identify dangerous goods and prevent them being sold. Here, artificial intelligence can improve consumer safety, explains Lone Saaby further.

"Danish consumers must have peace of mind when shopping online. Therefore, the government and the Danish Parliament have stepped up their efforts in this area. With the help of modern technology, we can now also react faster against the websites selling dangerous products. This is incredibly important, because it simply shouldn't be possible to make money from selling illegal products. We are talking about products that may be life-threatening

and distort competition for the companies that live up to the safety requirements," says Simon Kollerup, Minister of Business and Industry.

Also for the Danish Safety Technology Authority, the international launch is a milestone:

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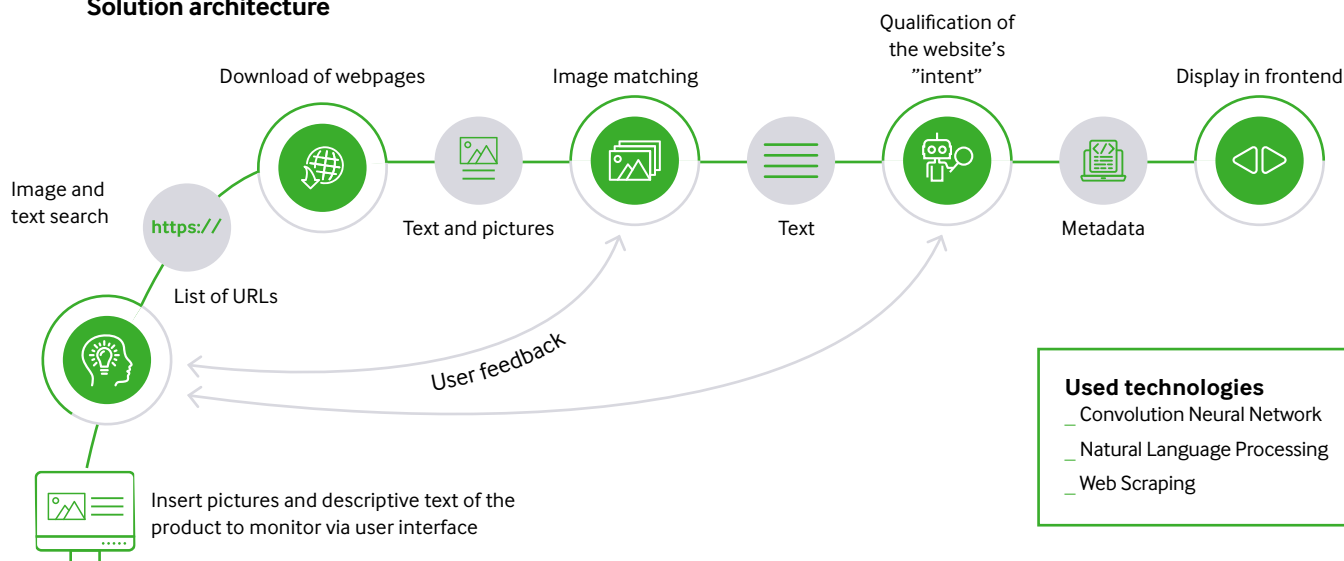
We won a 'Gartner Eye on Innovation Awards for Government' for AIME, which is developed in collaboration with KMD. We are launching the European equivalent of the tool, SAFE. It aims to make the search for dangerous and illegal products across EU simpler and safer. With the use of data sharing and artificial intelligence, we can make a significant contribution to the authorities to improve product safety for consumers. I am very proud that the tools that we have developed in collaboration with KMD can benefit so many people in Europe", says Lone Saaby, CEO of the Danish Safety Technology Authority.

In Denmark, the Danish Safety Technology Authority uses a Danish version of the tool, AIME, to plan proactive checks and carry out searches for individual products. The tool is continuously being further developed with new features, and last week it won the 'Gartner Eye on Innovation Awards for Government 2021' in the EMEA region.

KMD Graphics Insight ensures market surveillance of websites based on text and images of dangerous products. The idea arose when the Danish Parliament tightened legislation in this area on 1 July 2020 and gave the authorities the right to block websites if they continue to sell products that do not comply with Danish legislation and consumer safety requirements. At the same time, the penalties are being tightened with higher fines and potential prison sentences.

This led to KMD developing the product KMD Graphics Insight, which was implemented under the name AIME to the Danish Safety Technology Authority. The tool now serves as the authority's primary digital tool for identifying dangerous product on a website. When identifying dangerous products, authorities can ask the courts to block consumers' access to the website.

Solution architecture



Advantages






- _ Search all relevant web shops in countries or internet domains for product categories
- _ Uses Natural Language Processing to analyse text on websites and determine whether they are relevant webshops or irrelevant blog posts and reviews
- _ Supports all languages spoken in the EU including Danish and German
- _ Structured and documented process for market surveillance of products.
- _ Schedule repeatable searches for follow up of product surveillance e.g. Pop up web shops or reintroduction of products
- _ Can process millions of pictures and words

Market Surveillance through

- _ Advanced Machine Learning for recognizing products (one-shot image recognition)
- _ Advanced Natural Language processing (NLP) for classification of websites
- _ Integrated Machine Learning feedback system for continuously improving algorithms
- _ User interface for simple administration of personal searches and found products
- _ Schedules search functionality
- _ Population search for finding web shop pages with certain keywords

KMD Graphics Insight

Recall of non-compliant products

-  Non-compliant products are already identified by a picture and information such as name and brand
-  The case manager starts a case in Graphics Insight
-  Graphics Insight finds the product for sale in shops on the internet
-  A reoccurring search can be set up to check if the product returns for sale on the internet
-  The internet shop is contacted by the case manager and informed that they need to take the product down

Want to know more?

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Graphics Insight

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