Helping EyeEm Cut Image Keywording Time by 50%

mobiuslabs EyeEm

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Ramzi Rizk,
Co-Founder and CTO, EyeEm

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Principle Engineer, EyeEm

Customer Details

EyeEm — eyeem.com

Country or Region: Germany
Number of employees: 30
Industry: Photography

Customer Profile: EyeEm is one of the world's leading photography marketplaces and communities with more than 20 million users.

Business Situation: Processing thousands of images every day, EyeEm wanted to increase the accuracy of its photo and video tagging software. It also wanted to better identify content with high commercial potential.

Solution: The Mobius Labs SDK is deployed on EyeEm's own computer systems. Using computer vision technology and facial recognition, the software tags photographs and video almost instantaneously as they are imported into the archive.

Benefits

— More accurate tagging of photos and videos in milliseconds
— Identify most exciting sequences in video
— Facial recognition to confirm subjects of photographs
— Prompt photographers with best keyword for their photos
— Enable community participants maximize revenue from uploads
— Support the identification of images with higher commercial value
— Strengthen partnership with stock libraries by supplying more, high-quality images

EyeEm

Founded in 2010, Berlin-based EyeEm is now one of the world's leading photography marketplaces and communities with more than 20 million users. Launched originally as a smartphone app, the business is now one of the largest suppliers of photographs to the world's leading commercial photo libraries including Getty Images and Adobe.

Computer vision software is fundamental to the success of the EyeEm community and marketplace. The founders, including the CTO Ramzi Rizk, saw the early potential of the technology to classify and tag high quality photographs.

> "As well as making it possible to search accurately from a wider range of images, we were also able to satisfy growing demand for more original images than those offered by traditional stock photo libraries,"
>
> **Ramzi Rizk**
> CTO, Eyeem

Solution

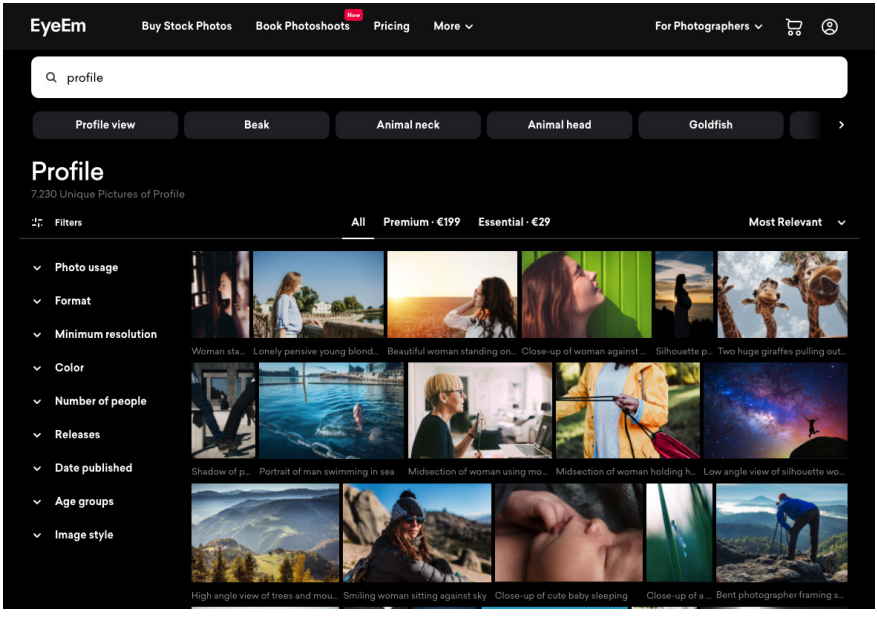
To keep the business at the cutting edge, EyeEm is constantly searching for ways to enhance its computer vision resources. In 2019, the company turned to Mobius Labs, another Berlin-based enterprise which supplies computer vision software to photo libraries, press agencies and digital marketing organizations around the globe.

EyeEm was attracted by ground-breaking features which include training classifiers to recognize new concepts in EyeEm community photographs in seconds and the ability to identify and tag the most eye-catching sequences from community videos in real time. Additionally, the Mobius Labs SDK can be deployed on laptops and smartphones, supporting machine learning even on these edge devices.

According to Ramzi, another strong argument in favour of the Mobius Labs technology is that it can be deployed internally, removing the need to outsource photo tagging and other artificial intelligence functionality to a third party.

“It’s simple to integrate the software with our existing systems, and we can use the Mobius Labs SDK to deploy machine learning features on laptops and smartphones and any other connected device with a camera,”

Ramzi Rizk
CTO, Eyeem



Benefits

With thousands of images added to the EyeEm platform every day, the ability to tag photographs accurately at lightning speed is essential to the success of the business. It also contributes to the experience of users: publishers and other businesses searching for high quality, original content, and photographers who want to stand out in an increasingly crowded market.

Faster tagging, greater accuracy

The Mobius Labs software is pre-delivered with more than 10,000 tags, including emotions, actions, objects and abstract concepts which greatly simplify and accelerate photo analysis and tagging.

Azhagu Selvan, Principle Engineer of EyeEm, says, “Using the legacy model it took an average of 2.67 seconds for each photo whereas with the new Mobius Labs model it takes 1.35 seconds, reducing the time by 50%.” Overall accuracy was also significantly better . “We were also impressed by the precision and categorization of keywords, which was an improvement on our previous set up,” says Selvan.

Accurate tagging matters more than ever when so much digital content is competing for the attention of business publishers and private consumers. Too few tags and the

images will never be discovered, too many generic terms and there's the risk that the perfect image gets drowned in an endless scroll of imperfect results.

Thanks to the accuracy of the Mobius Labs keyword tagging, customers searching for a photograph receive a smaller number of high-quality matches, which in turn increases the likelihood of download and payment.

A better experience for community photographers

The software also assists photographers by prompting them with an accurate list of keywords as soon as an image is uploaded. As more keywords are added, a power bar displays the 'discoverability' of the photo encouraging the end-user to add tags until the bar displays an 'easy' rating. "Although it is based on advanced artificial intelligence, the Mobius Labs software plays a human role in our community by guiding contributors towards a visual style that is distinctive and therefore more likely to be discovered in an online market-place," says Ramzi.

Adding new classifications automatically

Image classification

Another important Mobius Labs feature for EyeEm is the ability to train new classifiers and to recognize new objects and concepts in a matter of seconds. This could apply to a new product or a brand logo, enabling marketing departments and agencies to discover brand friendly imagery, or indeed imagery that infringes copyright.

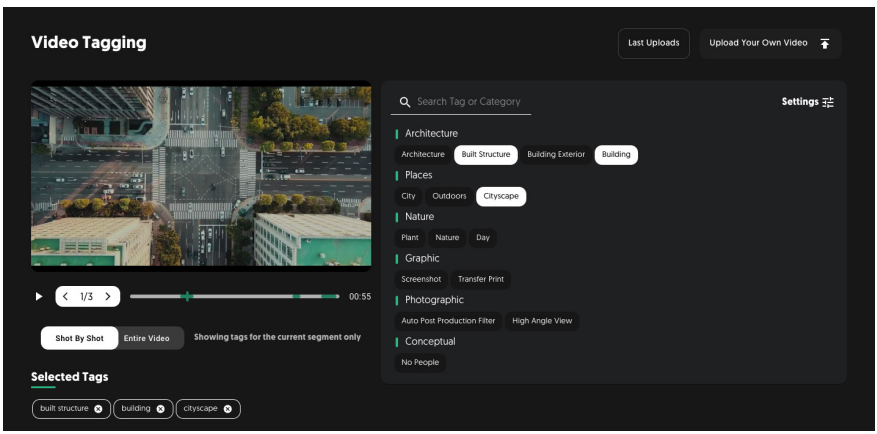
Automatic classification also has a role to play in photo-journalism and current affairs. During the coronavirus pandemic, the number of searches for 'home office' saw a massive increase. Training the software to better distinguish between a home office and a workplace desk became a priority. The software is equally helpful when classifying and re-classifying photographs that reflect changing attitudes towards society, diversity and the environment.

"We'd been developing our own automatic classification tool, but it never quite got off the ground. When the time came to upgrade, it made sense to deploy the Mobius Labs equivalent which is already well advanced and easily meets the demands of our content," says Ramzi.

Real-time video tagging

Ramzi also calls out the video component of the Mobius Labs software which analyzes video and adds keywords in real-time. Again, the ability to add emotional and conceptual labels, as well as concrete terms gives Mobius Labs the edge over other video classification systems. The technology also identifies the most exciting or eye-catching sequences from a clip and can locate related content so that the viewer can compare and select the most relevant sequences.

All these features support EyeEm in its efforts to identify the best content with the greatest commercial potential from the thousands of images uploaded every day. While the majority of photographs are added to the EyeEm online market, the very best are also submitted to EyeEm's stock photography partners including Getty Images and Adobe Stock further increasing the revenue potential of the EyeEm archive.



Focused on the future

Ramzi and the EyeEm team are now focused on the future. In the next few years we may see the first operational neural networks that can generate almost any image based on a few simple instructions from the end-user. At the same time the business is preparing for the next generation of smartphones and cameras with built-in AI chips.

While such camera devices are currently being used by commercial enterprises, the history of photography suggests that it won't be long before embedded AI technology is distributed to a mass consumer audience. "When that happens you're going to see the quality of consumer photography increase substantially," says Ramzi.

> "Thanks to Mobius Labs, we are ideally prepared for the next wave of disruption to the photo marketplace and community sector. We will continue to use computer vision technology to match these creators with a commercial audience."

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