

Neosperience White Paper
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Neosperience Cloud Image Memorability. Using AI to discover the true potential of your images.

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Neosperience Cloud Image Memorability.

Using AI to discover the true potential of your images.

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Introduction

What makes people buy?

Among all the questions that marketers have always been trying to answer, this is undoubtedly the most important, but the most complex at the same time.

In this scenario, it is important to consider that, today, people's average attention span is getting shorter and shorter, and this is even more true when it comes to commercial content.

When browsing social media, E-Commerce websites and Apps - the same way it happens when we walk on the streets - we are continuously exposed to marketing communications, and these are above all visual. Since the Internet and social networks have become an integral part of our everyday lives, we gravitate mostly toward visual content, and marketers can't afford to look the other way.

So, the question "*What makes people buy?*" is increasingly influenced by the images that brands use to communicate with us, online and offline; by their ability to catch our attention, generate positive emotions, and make their products relevant and memorable.

That's the point: when you use a promotional image, capturing customers' attention is not enough. It is a necessary but not sufficient condition. Rarely, the purchase immediately follows the mere sight of an advertisement, so it becomes essential to enter people's minds, to be remembered.

Scientific studies have established that most of our buying decisions are memory based. Thus, marketers should continually look for ways to make people remember their brand and products, working through memory with their ads, messages, and all promotional content.

So what makes a memorable image? What makes customers remember your brand and your product?

Model

To help brands answer these questions, we have created Image Memorability, a new service designed from the latest research in the field of Artificial Intelligence, that allows you to discover the effectiveness of images by objectively measuring their memorability and impact in just a few seconds.

To gauge the memorability of images, tens of thousands of people involved in the experiment have been exposed to hundreds of pictures, and asked a second time to tell which of them they remembered having already seen. Images that were recalled on their second appearance, after 30 days, were considered memorable, and the analysis of these data allowed to develop the Memorability Score, that ranges from 0 to 1, where 1 means that the image is the most memorable.

People were also asked to indicate what they remembered, in particular, in the images they recognized: a detail, an object, a sentence, a logo, The analysis of these responses allowed to develop the Memorability Heatmap that shows which elements of the image remain in people's mind.

Using Convolutional Neural Networks (CNNs) applied to large image data sets, the research has demonstrated that fine-tuned in-depth features outperform all other elements by a large margin. Analysis of the responses of the high-level CNN layers shows which objects and regions of the image are positively and negatively correlated with memorability.

The revelation brought by Image Memorability is that the precise image characteristics that the system is identifying are not known. Such is the nature of deep learning now applied to digital customer experience innovation, in which computers are trained to recognize patterns.

Outputs And Outcomes

Let's look at this image.



Using Image Memorability, we discover that 60% of people will remember it about 30 days after the first viewing — a good result.

But memory alone is not enough to tell if this image is effective or not. Certain elements, in particular, should be remembered and remain in people's mind: a product, some of its details, a logo, a payoff, That's what memorability heatmaps are for.



Let's look at the single products. If the sales target was the pair of shoes, can we consider it an effective image? As we can see, just some objects are positively correlated with memorability: the white sweater on the upper left and the pink garment on the right. They are responsible for activating memory, unlike the other objects, that remain in the background of people's mind. As a result, this cannot be considered effective. Despite being easy to remember, it doesn't bring out the right product, but other surrounding objects.

You can launch beautiful campaigns, and you can post pretty images, but this does not mean that they are effective: everyone can remember the image, but not your brand and your products. So it is not the single output, but the combination of the Memorability Score and the Memorability Heatmap that tells you if your image is effective or not.

As a result, in the short term (it takes only 14 seconds to analyze an image!) Image Memorability allows you to choose the most powerful images - among those available - for your campaigns or any other visual marketing activity. Over time, it will enable you to

understand what makes your images highly memorable, and how to make the best elements stand out.