

Estimating aesthetics and interestingness of images

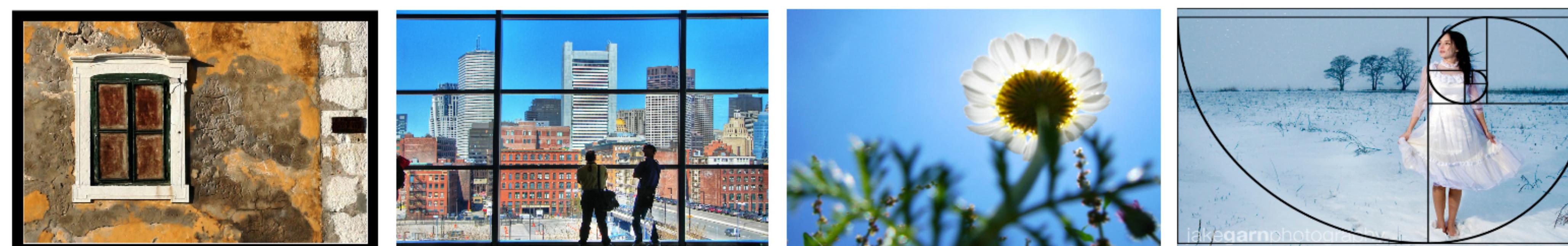
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The Web uses statistical measures such as click-throughs, comments, and favorite tags to obtain an aesthetic score for a photograph.

Flickr uses this extensively in their 'Sort by interestingness' functionality in the search interface. But with the advent of processing capabilities and algorithmic power, it is actually possible to measure attributes which contribute to the aesthetic quality of a photograph.

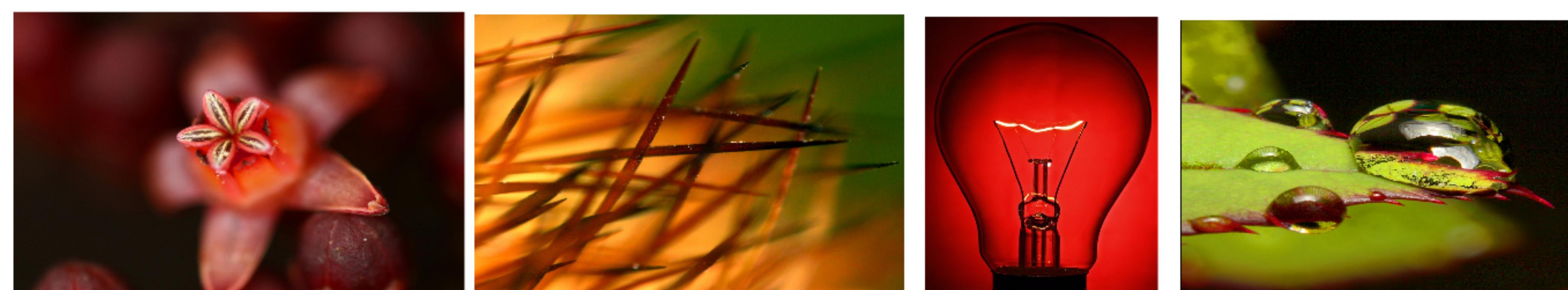
The human mind implicitly looks for aesthetically superior content in the results of any image-retrieval, recognition and quality differentiation problem.



Rule of thirds and Fibonacci spiral



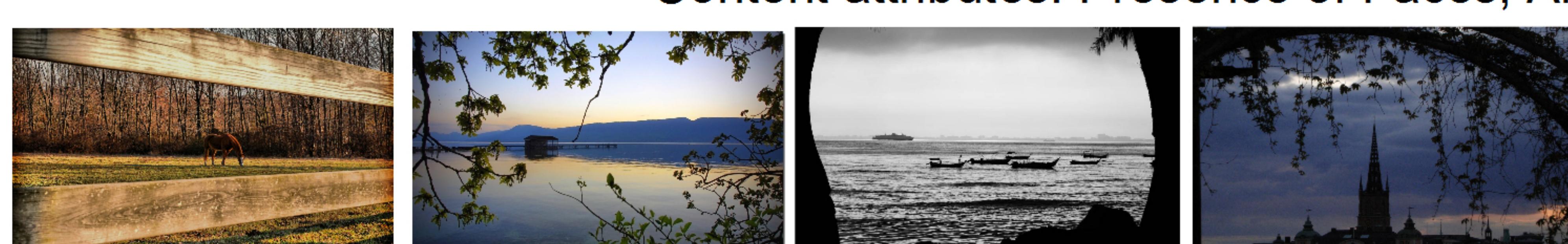
Opposing colors and controlled saturation in images



Saliency and simplicity



Content attributes: Presence of Faces, Animals, Indoors/Outdoors, Crystalline structures



Natural framing and vanishing points



Illumination attributes: Clear skies, Night skies, Sunsets, Cloudy skies

Applications of the concept:

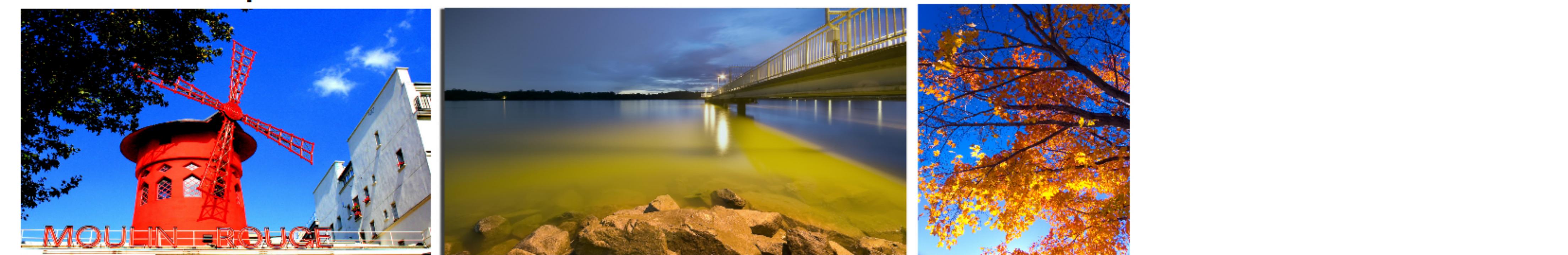
- Aesthetic re-ranking of Image-search results: Find not only the most apt image for your query, but the most beautiful image which fits the purpose.
- While 'web-interestingness' of images is an important measure of characterizing images, it is subjective and temporary. The aesthetic quotient of an image is permanent.

High level attributes potentially usable to detect aesthetic value of a photograph:

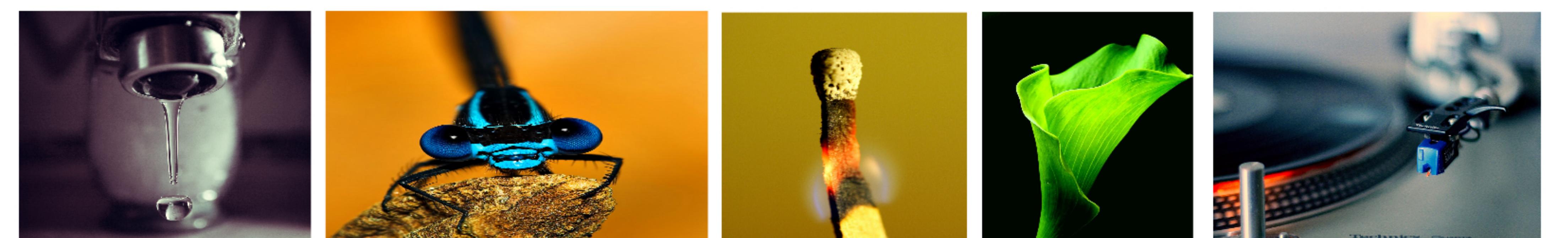
- Composition attributes: Rule of Thirds, Opposing Colors, Saliency, Low DoF, Framing and Vignetting, Presence of Vanishing Points Present.
- Lighting/Illumination Attributes: Night skies, Sunny skies, Sunsets, Cloudy skies, Sun-present.
- Content Attributes: Indoor/Outdoor/Scene type, Presence of people or animals, Portraits (or large faces), Presence of motion blur, Water or crystalline structure present.



Rule of thirds and Fibonacci spiral



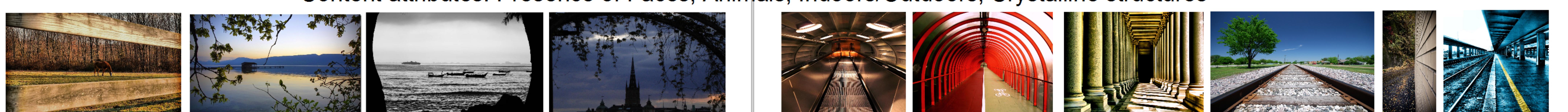
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- Computationally measuring aesthetics in historic works of art/paintings could assist in the study of different styles of various artists. Who conformed to the norms of art? Who thought out-of-the-box? Did it start a trend?
- Personal photo-album management: Wouldn't you like it if your 'best' photographs could be automatically filtered when you are showing your 10,000 strong photography collection to your friends?