

12. Automatic photo tag recommendation for Flickr

People from all over the world increasingly share their knowledge, experiences, opinions, photos and videos online. New kinds of language-based search technologies are needed to make this multi-media content effectively searchable.

In our demonstration, we offer a web interface which allows the user to annotate images taken at large scale social events: i.e. to describe in words some extra information about the image.

Annotation is done in order to make huge collections of photos better searchable by keywords. We use social media data, as well as techniques from information retrieval and image processing, in order to automatically recommend photo tags. This makes the annotation process much easier. A photo sharing web service such as Flickr can benefit from our automatic photo tag recommendation.



ICT science question

Automatically detecting objects and scenes from images is one of the biggest challenges in artificial intelligence. This is due to the fact that computers have no understanding of the world (the semantic gap).

Previous methods have used either the information of the pixels of the photos, or the tags added by the user in order to automatically annotate images. We offer a new solution which combines visual appearance, context and social media data in order to offer tag suggestions for photos.

Application

Our demonstration applies to the process of annotating images uploaded online which are often annotated with less than four tags. Such a small amount of tags makes photo retrieval and recom-



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mendation difficult. Our work could for example be applied in an image sharing website domain such as Flickr.

Alternative Application

Annotation is broadly applied to build knowledge bases. Our application is best suited for image annotation but could alternatively be applied to the annotation of any web object, such as videos, news articles, web documents etc.

Nice to know

With the high velocity of social media, we are able to mine the 'wisdom of the crowd' to collect relevant tags describing images taken at large scale events as they happen.

Quote

"Using the keyboard to tag images is slow and boring. This demo instead makes the whole process possible using only the mouse."



Make image tagging easy by using context and content recognition.



Exploit historical big data in order to compute on-the-fly tagging recommendations in a image sharing website scenario.



Offer an easy image tagging scenario to the user by exploiting big data.



Combine user tags, textual and visual features in order to suggest the best tags for a photo.

