**Tag Based Image Search by Social Re-ranking**

**ABSTRACT:**

Social media sharing websites like Flickr allow users to annotate images with free tags, which significantly contribute to the development of the web image retrieval and organization. Tag-based image search is an important method to find images contributed by social users in such social websites. However, how to make the top ranked result relevant and with diversity is challenging. In this paper, we propose a social re-ranking system for tag-based image retrieval with the consideration of image’s relevance and diversity. We aim at re-ranking images according to their visual information, semantic information and social clues. The initial results include images contributed by different social users. Usually each user contributes several images. First we sort these images by inter-user re-ranking. Users that have higher contribution to the given query rank higher. Then we sequentially implement intra-user re-ranking on the ranked user’s image set, and only the most relevant image from each user’s image set is selected. These selected images compose the final retrieved results. We build an inverted index structure for the social image dataset to accelerate the searching process. Experimental results on Flickr dataset show that our social re-ranking method is effective and efficient.

**EXISITING SYSTEMS:**

Users cannot precisely describe their request with single words and tag suggestion system always recommend words that are highly correlated to the existing tag set, thus add little information to a users’ contribution. Besides, polysemy and synonyms are the other causes of the query ambiguity. the existing approaches highly rely on the visual and semantic information, and thus ignore the social clues such as user and view information. a fundamental problem in the re-ranking of the tag-based social image retrieval is how to reliably solve these problems.

**DISADVANTAGES:**

The re-ranking problem in the tag-based image retrieval has gained researchers’ wide attention. Nonetheless, the following challenges block the path for the development of re-ranking technologies in the tag-based image retrieval. Tag mismatch. Social tagging requires all the users in the social network to label their uploaded images with their own keywords and share with others. image annotation, there is no predefined ontology or taxonomy in social image tagging. Every user has his own habit to tag images.

**PROPOSED SYSTEMS:**

We take the views into consideration to learn the relevance score of each image on the basis, In order to achieve this, a new iterative algorithm to obtain the relevance score is proposed. this paper is more considerate. Discussions about weight selection and image features in the regularization framework are complemented. Through this discussion, we find that our performance doesn’t rely on the adjustment of parameters and feature selection. It’s robust and relatively stable. Besides, in order to find an optimal number of representative images which are selected from each user’s image set, many new comparison experiments and comprehensive discussions are added. proposed a tag ranking method to rank the tags of a given image, in which probability density estimation is used to get the initial relevance scores and a random walk is proposed to refine these scores over a tag similarity graph. proposed to learn the relevance of tags by visually weighted neighbor voting, a variant of the popular baseline neighbor voting algorithm.

**ADVANTAGES:**

`Tag-based image search is an important method to find images contributed by social users in such social websites. However, how to make the top ranked result relevant and with diversity is challenging. In this paper, we propose a social re-ranking system for tag-based image retrieval with the consideration of image’s relevance and diversity. We aim at re-ranking images according to their visual information, semantic information and social clues. The initial results include images contributed by different social users. Usually each user contributes several images.

**ALGORITHMS:**

i).Re-Ranking Algorithm

ii). k-Means Clustering Algorithm

**k-Means Clustering Algorithm:**

k-means is one of the simplest unsupervised learning algorithms that solve the well known clustering problem. The procedure follows a simple and easy way to classify a given data set through a certain number of clusters (assume k clusters) fixed apriori. The main idea is to define k centers, one for each cluster. These centers should be placed in a cunning way because of different location causes different result. So, the better choice is to place them as much as possible far away from each other. The next step is to take each point belonging to a given data set and associate it to the nearest center.

**Re-Ranking:**

The ranked images for the query tag q: 1) keyword matching, 2) inter-user re-ranking, and 3) intra-user re-ranking. The details of these three main parts in the online system will be described as follows.

 Keyword Matching For the query , from the inverted file index { }, we can obtain the corresponding images that all tagged with query q, which is denoted by X. It can be further described by taking the social user’s information into account, as follows.

X={x(u1),…x(uz)}={x1,…Xz}

**ARCHITECTURE DIAGRAMS:**

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**SYSTEM SPECIFICATION**

**Hardware Requirements:**

* System : Pentium IV 3.5 GHz or Latest Version.
* Hard Disk : 40 GB.
* Monitor : 14’ Colour Monitor.
* Mouse : Optical Mouse.
* Ram : 1 GB.

**Software Requirements:**

Operating system : Windows XP or Windows 7, Windows 8.

* Coding Language : Java / J2EE (Jsp,Servlet)
* Data Base : My Sql Server
* Documentation : MS Office
* IDE : Eclipse Galileo
* Development Kit : JDK 1.6
* Server : Tomcat 6.0

**CONCLUSION:**

 We propose a social re-ranking method for tag-based image retrieval. In this social re-ranking method, inter-user re-ranking and intra-user re-ranking are carried out to obtain the retrieved results. In order to enhance the diversity performance, user information is firstly introduced into our proposed approach and obtains satisfactory results. Besides, views of social image is also firstly fused into a traditional regularization framework to enhance the relevance performance of retrieved results. Discussions and experiments have demonstrated that our proposed method is effective and time-saving. However, in the inter-user ranking process only user’s contribution is considered and the similarity among users is ignored. In addition to this, many information in Flickr dataset are still ignored, such as title information, time stamp and so on. For future work, we will investigate the similarity among user groups in Flickr dataset. Therefore, we can fuse these relationships to enhance the diversity performance of image ranking system.