

A Review on User Personalized Tag Based Image Search

By Tag Relevance

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Abstract - With an increasing number of images that are available in social media, image annotation has emerged as an important research topic due to its application in image matching and retrieval. Most studies cast image annotation into a multi label classification problem. The main shortcoming of this approach is that it requires a large number of training images with clean and complete annotations in order to learn a reliable model for tag prediction. We address this limitation by developing a novel approach that combines the strength of tag ranking with the power of matrix recovery. Instead of having to make a binary decision for each tag, our approach ranks tags in the descending order of their relevance to the given image, significantly simplifying the problem. In addition, the proposed method aggregates the prediction models for different tags into a matrix, and casts tag ranking into a matrix recovery problem. It introduces the matrix trace norm to explicitly control the model complexity, so that a reliable prediction model can be learned for tag ranking even when the tag space is large and the number of training images is limited. Experiments on multiple well-known image data sets demonstrate the effectiveness of the proposed framework for tag ranking compared with the state-of-the-art approaches for image annotation and tag ranking.

Key Words: Image search, Tag-based Image Retrieval, Content-based Image search, Re-ranking, different types of image search filter.

1. INTRODUCTION

Amounts of images and videos spring up everywhere on the Internet. This phenomenon has brought great challenges to multimedia storage, indexing and retrieval. Generally speaking, tag-based image search is more commonly used in social media than content based image retrieval and context-and-content based image retrieval [1].

CBIR is used to find out the matched images based on their visual equality to a query image. TBIR that represents images by manually assigned tags. To define tag manually it is a time consuming process that's why number of algorithms have been developed for automatic image annotation [2].

Flicker is an image hosting and video hosting website and web services suite that was created by Ludicorp. In Addition to being a popular website for users to share and embed personal photographs and effectively an online community. The service is widely used by photo researchers and by bloggers to host the images that they embed in blogs and social media. Tagging images helps in their better organization for image search and retrieval [5].

Large numbers of images are associated according to their locations when they were taken. Millions users shared large scale geo-tagged photos for estimate the automatic location [7].

Learning to rank technique is basically used in information retrieval, data mining and natural language processing. This system retrieves data from the collection and returns the top-ranked data. Visual re-ranking also done for combining the visual information which combines both the textual and visual information and returns visually satisfying retrieved results. Different models are used in that (VCLTR) visual features and click features in image retrieval it is used for to enhancing the model performance, visual features and click features, and FALM approach for to solve objective functions [8].

2. RELATED WORK

Dan Lu, Songhe Feng, et al. [1], [2], introduced Tag based image search (TBIS) and Content-based image retrieval (CBIR) techniques. TBIS and CBIR identifying the matched images based on their tags and visual similarity to a query image. In that the re-ranking of the tag based image retrieval focus on Tag processing strategy, Relevance ranking approach, and Diversity enhancement of the retrieval results. Iterative optimization algorithm is used to obtain the relevance score of the images.

In learning to rank image using automatic image annotation and tag ranking approach. Relevance tag set and irrelevance tag set are used in training area and tag ranking in descending order used in testing area [2].

H. Zhang, et al. [3], People uploaded photos in flicker in that tagging method are used and it is preferable to people.

G. Agrawal, et al. [4], Tags are used to search the visual content easily and effectively. In relevancy tag ranking automatic tagging and manual tagging are used.

Rudi L. Cilibrasi, et al. [6], Latent Semantic Analysis (LSA), It's a most important technique which is applied in various forms in great number of applications.

Xueming Qian, et al.[9], Social Image Tagging With Diverse Semantics used Review of Image Tagging and Review of Image Search With Diversity method to retrieve the resultant images.

3. SYSTEM ARCHITECTURE

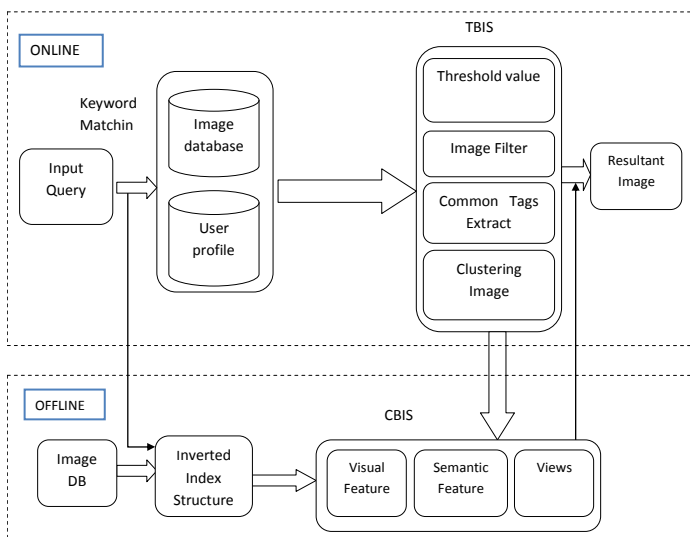


Fig -1: User personalized TBIS system.

4. CONCLUSIONS

In these review paper results show that the resultant image using semantic feature and visual feature. In that 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.

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