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Result for Re-ranking of Web Images

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Abstract— Image re-ranking, is an active way to improve the results of web-based image search and has been accepted by current commercial search engines. When a query keyword is implanted, a list of images are first retrieved based on textual format given by the user. By asking the user to select a query image from the pool of images, the remaining images are re-ranked based on attributes i.e. semantic signatures with the stored image. . Query entered by the user is searched and the result displayed is in well organized format i.e. the images user wants are searched and displayed in re-ranked manner by using some algorithms. In this paper, we propose a image re-ranking framework, in which automatically offline images are searched and result is displayed as the re-ranked pool of images . The images are inserted into their related semantic spaces to get semantic signatures with the help of one click feedback from the user. At the online stage, images are re-ranked by comparing their semantic signatures obtained from the semantic space specified by the query keyword given by the user. The proposed query-specific semantic signatures improve both the accuracy and efficiency of image re-ranking.

Keywords— Image, Re-ranking, Semantic signatures, keyword expansion.

I. INTRODUCTION

In this paper, a novel framework is proposed for web image re- ranking. As an alternative of universal concept dictionary, it makes use of different semantic spaces for different query keywords individually and automatically. Fig 1 shows traditional way of web image re-ranking.The semantic space related to the images to be re-ranked can be significantly narrowed down by the query keyword provided by the user.

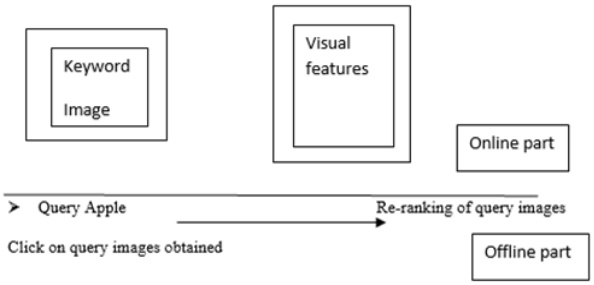


Figure 1: Traditional Approach of Re-ranking Images

II. MOTIVATION

To learn automatically offline different visual semantics space for different query keywords through keyword expansions. The Google provides only related result with entered keyword, so to overcome this disadvantages web image re-ranking plays an important role .Instead of constructing a concept dictionary, it automatically takes the input as images and produces the required result based on semantic signatures .For example, if the query keyword is “jaguar”, the semantic concepts of “hill” and “london” are unlikely to be relevant and can be ignored. Instead, the semantic concepts of “jaguar” and “car” will be used to learn the visual semantic space related to “jaguar”.

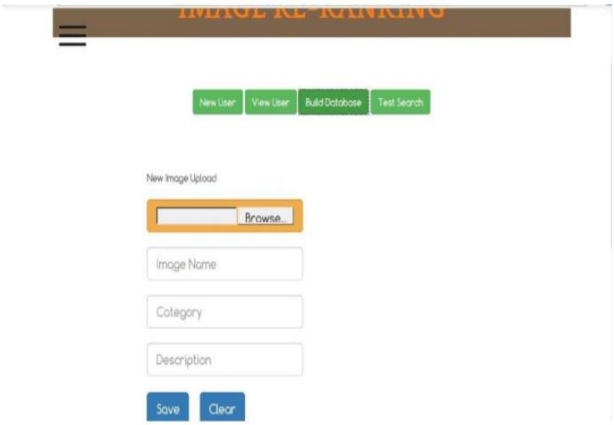
III. RESULTS

In this paper, we have used various algorithms and methods to retrieve images from the database using semantic signatures. We have used windows operating system to execute the project, Eclipse IDE has been used as an development environment. We used Jsp , JavaScript, AJAX, JSON as Front end and SQL as back end.

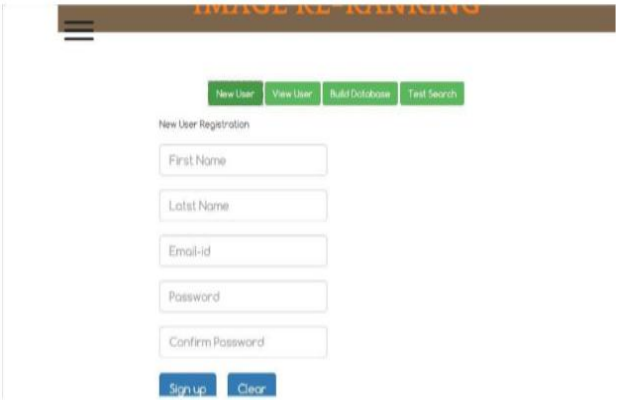
The stages involved in this project are displayed in the form of screenshots.

1. Image upload by admin
2. Image upload
3. User registration before search
4. Search window
5. Search using semantic signatures
6. Search Results for Apple
7. Preview of the image

8. Login window to download
9. Image available for download
10. Image annotation displayed



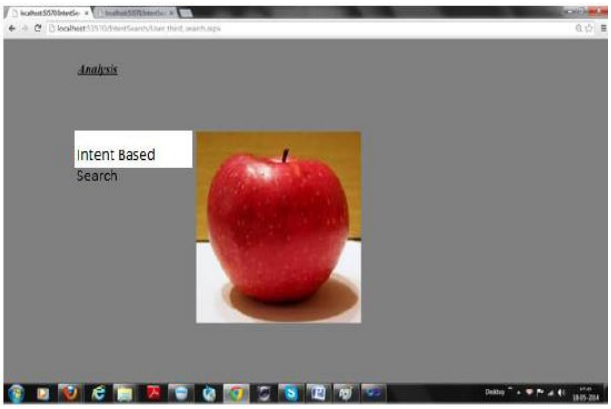
Upload Images



New User

View User

Seach Page



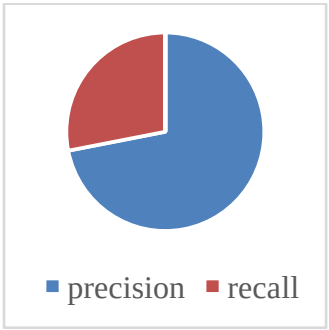
Final result

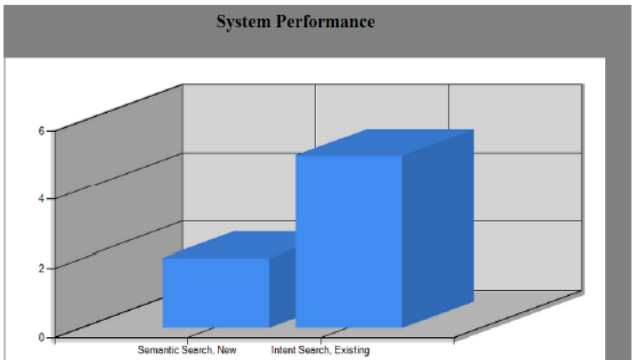
Performance metrics

- Precision and recall

❖ **Recall =** number of relevant images in the returned images / total number of relevant images in the database

❖ **Precision =** number of relevant images in the returned images / total number of returned images





IV. RELATED WORK

In this paper, content-based image retrieval (CBIR) takes a single query image, and displays similar images. This author defines localized content-based image retrieval as a CBIR task where the user is only interested in a portion of the image, and the rest which are displayed is irrelevant. Unless the user explicitly marks the region of interest, localized CBIR must rely on multiple images (labeled as positive or negative) to learn which portion of the image is of interest for

the user. A challenge for localized CBIR is how to represent the image to capture the content. The author presents and compares two novel image representations, in which it extends traditional segmentation based and salient point-based techniques respectively, and to capture content in a localized CBIR setting. In this paper , the author proposes a novel and generic video/image re-ranking algorithm, Information Bottleneck re-ranking, which reorders results from text only searches by discovering the salient visual patterns of relevant and irrelevant shots from the approximate relevance provided by text results. The IB re-ranking method, based on a rigorous Information Bottleneck (IB) principle, which finds the optimal clustering of images that preserves the maximal mutual information between the search relevance and the high-dimensional low-level visual features of the images in the text search results. The experimental analysis has also confirmed that the proposed re-ranking method works well when there exist sufficient recurrent visual patterns in the search results, as often the case in multi-source news videos. With the help of the re-ranking technique the image can be ranked upon the user's search intention.. The re-ranking of images can be re-ranked based upon the feedback from the user. In this paper , relevance Feedback is an important tool to improve the Performance of content-based image retrieval (CBIR) . In a relevance feedback process, the user first labels a number of relevant retrieval results as positive feedback samples and some irrelevant retrieval results as negative feedback samples. A CBIR system refines all retrieval results based on these feedback samples. These two steps are carried out iteratively to improve the performance of the image retrieval

V. TEXT MINING

The word-basedsigns in the image search include the neighboring texts and image captions. The standard stanching and stop wordremoval isperformed in the preprocessing. In addition, HTML tagsand area-specific stopwords (suchas"html"or"jpg") areignored. We extract top L terms of the rest terms in the documents for each query and calculate their term frequency (tf) for each document as the textual feature. To compute textual similarity, we use the cosine distance which is widely adopted in information retrieval. Let Di denote the L dimensional vector of the tf of the it*h*document. The kt*h*element of the Di is represented as dik. In general, as most popular image search engines build only upon text information for the initial ranked list, Initial Visual Ranking Score. We further use K-means to cluster the similar patches into "visual words"and use Bag-of-Word (BoW) to represent each image as it has proven to be useful for object and scene retrieval .For the visual initial ranked list, we consider estimating the visual clustering density based on the initial results. A straightforward achievement is to first perform K-mean clustering, and then make a linear grouping of cluster scores and initial scores. This kind of combination is widely used in multimodal video search systems andvideo search re-ranking .Current video search approaches are mostly restricted to text-based solutions which process keyword queries against text tokens associated with the video, such as speech transcripts, closed captions, and recognized video text (OCR). However, such information may not necessarily come with the image or video sets. The use of other modalities such as image content, audio, face detection, and high-level concept discovery has been shown to improve upon text-based video search systems.

VI. CONCLUSION

In this paper we have given a small description about re-ranking methodologyfor searching the multimedia type of data on web with the additional information about the types of re-ranking can be done with the methodologies applied on them that can be used for image retrieval on internet as well as what are the procedures available for the processing of image retrieval methodologies with its types and themeasurementparameters that can be used also defined in this article with the outcome that image retrieval on basis of modality is much more better than usual used method that is text based search and what are the real time datasets available for our project on internet for that also metadata is provided.

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