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A Structure for Semantic Image Retrieval Using Low Level Attribute and Image Annotation

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Abstract: *The information retrieval is one of the most frequent techniques or application in our daily life for data search in different formats and kinds. In this presented work the image based data retrieval technique is investigated and demonstrated. The image retrieval techniques can be divided two major domain first based on text available in image data and second the content inside the image. When the techniques utilize the image contents then such kind of techniques are known as the content based image retrieval. Content based image retrieval technique consumes image features. These features are essential image attributes that are used to identify the image and the advantage of these features are there size. Therefore there are three key features are used namely colour feature, edge feature and their texture. The techniques which include the content based image retrieval, offers a user to search an image based on image query, but these techniques are not supporting the text based query. In addition of that, the technique required some additional techniques to correct the retrieval process such as user feedback, these methods consumes additional time of search. Thus a new technique with hybrid concept is proposed for improving the content based image search. Therefore it includes the concept of image based user query and text based user query support. The proposed technique includes the technique to train the system using the image attribute and text for annotation of image. For identifying the images more accurately the text and image features are used. Finally to retrieve the data (image) using user query (image or text) a KNN algorithm is implemented with it. The implementation of the proposed model is performed using visual studio technology and their performance in terms of time and space complexity is estimated. In addition of that the performance in terms of accuracy and error rate is also provided for demonstrating the relevancy of image search.*

Key Words: *image retrieval, low label attributes extraction, content based image, image annotation, and semantics.*