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A MULTI-OBJECT IMAGE RETRIEVAL FRAMEWORK USING SUPPORT VECTOR MACHINE

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Abstract

The Annotation Based Image Retrieval (ABIR) Systems are capable to retrieve images using Query-By-Keyword (QBK) technique. For retrieving multi-object images using ABIR the automatic annotation process should annotate the individual objects present in the image with higher semantic. In this paper we proposed a novel framework for semantically annotating multi-object images using Support Vector Machine (SVM) and to retrieve multi-object images using keywords. We used Region Growing method for segmenting the individual objects and we used the dominant color signatures for labeling the identical regions. The experimental results proved the greater accuracy of segmentation process. The performance of multi-class SVM classifier is well utilized for annotating multi-object images with higher semantic. The annotation keywords are tagged with the multi-object images, then the retrieval process become a simple keyword matching process.

Keywords: Image Retrieval, Semantic Image Annotation, Support Vector Machine, Region Growing and Labeling, Query-by-Keyword