

A Hybrid Approach to Content-based Image Retrieval

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Abstract

In Content Based Image Retrieval (CBIR) Systems, features of the query image are matched with those of a candidate image in the database. It has been shown by several researchers in this area that segmentation of the images before matching improves retrieval precision for some image databases. The features derived from the clusters obtained by segmentation of the query image are matched with those of the clusters from a given candidate image from the database. This approach is not uniformly effective for all types of image databases. In this work, an attempt has been made to combine the basic approach (without segmentation) with the segmentation approach, with the objective of improving retrieval precision. Relevance feedback has been used to boost the performance further. Results of extensive experiments have been presented to illustrate the effectiveness of the proposed approach.

(Joint work with S. Bose, J. Mallick and S. Kumar)