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Abstract

The aim of a Content-Based Image Retrieval (CBIR) system, also known as Query by Image Content (QBIC), is to help users to retrieve relevant images based on their contents. CBIR technologies provide a method to find images in large databases by using unique descriptors from a trained image. The image descriptors include texture, color, intensity and shape of the object inside an image. Several feature-extraction techniques viz. , Average RGB, Color Moments, Co-occurrence, Local Color Histogram, Global Color Histogram and Geometric Moment have been critically compared in this paper. However, individually these techniques result in poor performance. So, combinations of these techniques have also been evaluated and results for the most efficient combination of techniques have been presented and optimized for each class of image query. We also propose an improvement in image retrieval performance by introducing the idea of Query modification through image cropping. It enables the user to identify a region of interest and modify the initial query to refine and personalize the image retrieval results.

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