Abstract

An image retrieval system is a computer system for browsing, searching and retrieving image using the actual content of image like visual features of an image as color, texture, shape, rotation, scaling factor and spatial layout. Now a days, retrieval of image from a large database are based on their visual similarity. The proposed Image retrieval system allows automatic extraction of target image according to object feature of the image itself. The proposed system is to improve the performance of image retrieval system using image classification. To improve existing image retrieval system, image decomposition, feature extraction and image matching mechanism should be improved. For image decomposition, modified Haar Wavelet Transform and D4 Wavelet Transform, to decompose color image into multilevel scale and for the conversion of wavelet coefficients has been used. Furthermore, progressive image retrieval strategy to achieve flexible CBIR is incorporated. The image feature are extracted by using Scale Invariant Feature Transform (SIFT). This approach relies on the choice of several parameters which directly impact its effectiveness when applied to retrieve image. Image matching is done by using NNS algorithm in KD-tree. The proposed system has demonstrated a improved image retrieval system on various database include WANG, MirFlickr, CLEF that containing approximately 15,000 color images.
References


Index Terms

Computer Science
Pattern Recognition
Keywords
Image retrieval system  SIFT  Haar Wavelet transform  D4 Wavelet Transform
Feature Extraction
Kd-tree Algorithm