Local Texture and Global Color Descriptors for Content Based Image Retrieval

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Abstract : An image retrieval system is a computer system for browsing, searching, and retrieving images from a large database of digital images a new algorithm meant for content-based image retrieval (CBIR) is presented in this paper. The proposed method combines the color and texture features which are extracted the global and local information of the image. The local texture feature is extracted by using local binary patterns (LBP), which are evaluated by taking into consideration of local difference between the center pixel and its neighbors. For the global color feature, the color histogram (CH) is used which is calculated by RGB (red, green, and blue) spaces separately. In this paper, the combination of color and texture features are proposed for content-based image retrieval. The performance of the proposed method is tested on Corel 1000 database which is the natural database. The results after being investigated show a significant improvement in terms of their evaluation measures as compared to LBP and CH.

Keywords : color, texture, feature extraction, local binary patterns, image retrieval
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