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Abstract

Image retrieval is one of the main topics in the field of computer vision and pattern recognition. Local descriptors are gaining more and more recognition in recent years as these descriptors are capable enough to identify the unique features, which suitably and uniquely describe any image for recognition and retrieval. One of the popular and efficient frame works for capturing texture information precisely is the Local binary pattern (LBP). LBP descriptors perform well in varying pose, illumination and lighting conditions. LBP is a structural approach and plays significant role in wide range of applications. One of the disadvantages with LBP based frame work is its dimensionality. The dimensionality of LBP increases, if one increases the number of neighboring pixels. Further statistical approaches gained lot of significance in image retrieval and LBP based methods raises high dimensionality and complexity issues, in deriving statistical features. The present paper addresses these two issues by quantizing the LBP code, to reduce dimensionality and by deriving GLCM features on quantized LBP. The proposed method is experimented on Corel database and compared with other existing methods. The experimental results indicate the high retrieval rate by the proposed method over the existing methods.

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Index Terms

Computer Science

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Keywords

Structural; Statistical approach; Pose; Illumination; Dimensionality;