World Academy of Science, Engineering and Technology
International Journal of Computer and Information Engineering
Vol:12, No:02, 2018

# Improved Performance in Content-Based Image Retrieval Using Machine Learning Approach

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**Abstract :** This paper presents a novel approach which improves the high-level semantics of images based on machine learning approach. The contemporary approaches for image retrieval and object recognition includes Fourier transforms, Wavelets, SIFT and HoG. Though these descriptors helpful in a wide range of applications, they exploit zero order statistics, and this lacks high descriptiveness of image features. These descriptors usually take benefit of primitive visual features such as shape, color, texture and spatial locations to describe images. These features do not adequate to describe high-level semantics of the images. This leads to a gap in semantic content caused to unacceptable performance in image retrieval system. A novel method has been proposed referred as discriminative learning which is derived from machine learning approach that efficiently discriminates image features. The analysis and results of proposed approach were validated thoroughly on WANG and Caltech-101 Databases. The results proved that this approach is very competitive in content-based image retrieval.

**Keywords :** CBIR, discriminative learning, region weight learning, scale invariant feature transforms
**Conference Title :** ICCVIP 2018 : International Conference on Computer Vision and Image Processing
**Conference Location :** Mumbai, India
**Conference Dates :** February 22-23, 2018