Abstract

The research in content based image retrieval has always been nurtured because of the thirst for better and faster image retrieval techniques. Reducing the feature vector size for faster image retrieval and till achieving better performance is herculean task. The paper presents 24 novel image retrieval techniques using color averaging methods on row mean, column mean, forward diagonal mean, backward diagonal mean, row & column mean, forward & backward diagonal mean, four tiles, sixteen tiles and 64 tiles of image. The proposed CBIR techniques are tested on generic image database having 1000 images spread across 11 categories and COIL image database having 1080 images spread across 15 categories. For each proposed CBIR technique 75 queries (5 per category) are fired on the generic image database and 55 queries (5 per category) are fired on the COIL image database. To compare the performance of image retrieval techniques average precision and recall are computed of all queries. The results have shown the performance improvement (higher precision and recall values) with proposed methods compared to all pixel data of image at reduced computations resulting in faster retrieval.
Reference

Image Tiling to Improve Performance of Image Retrieval Using Color Averaging Techniques

- http://wang.ist.psu.edu/docs/related/Image.orig (Last referred on 23 Sept 2008)
Babasaheb Gawde Institute of Technology, Mumbai, 13-14 March 2010, The paper will be uploaded on online Springerlink.


Index Terms

Computer Science
Soft Computing

Key words
CBIR
Image Tiling
row mean
column
mean
diagonal mean