A New Approach for Enhancing Image Retrieval using Neutrosophic Sets

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Abstract

This paper adopts a novel model for Content-Based Image Retrieval (CBIR) system depending on an excellent segmentation strategy and combination of Visual Descriptors (VDs). The presented model is divided into four main phases: image segmentation, visual descriptors, Dimensionality Reduction (DR) and similarity matching. An improved segmentation technique based on Neutrosophic Sets (NSs) is proposed and applied to see their ability and accuracy to segment images. In relative to the VDs, the geometrical moments are used to extract the shape of an object, the modified Stricker method to the color extraction is proposed and the MPEG-7 edge histogram descriptor is presented for each of them. Experimental results presented show that the proposed model provides precise image retrieval in a short time.

References

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Index Terms

Computer Science  Image Processing

Keywords

NSs  GMs  EHD  Evaluation function  ANMRR