

Abstract

Image retrieval using text-based query is longer effective as there is high probability that the result is not what expected. Therefore, image-based query retrieval system is developed. The system retrieves images whose content similarity with input image. This method called Content-Based Image Retrieval.

Image consists of many features, there are color, texture, and shape. Image retrieval can be done by matching features from input image with database images. There are so many images whose similar color distribution but irrelevant. This makes the usage of color feature in CBIR system is not enough so that it needs to be combined with other feature of image (e.g texture feature).

Feature extraction in this system uses Color Layout Descriptor for color extraction and Edge Histogram Descriptor for texture extraction. Performance of system which retrieves 5 top-relevant images using CLD alone was 66%, whereas when using EHD alone was 54.86%. However, when using a combination of CLD and EHD with adaptive weight the performance of system reaches 72,82%. Based on these results, the combination of CLD and EHD is managed to improve performance of system in CBIR built.

Keywords: Content-Based Image Retrieval, Color Layout Descriptor, Edge Histogram Descriptor, adaptive weight