

Abstract

Image retrieval is the process of browsing searching, and retrieving images from a large database of digital image. One of image retrieval system present today is content-based image retrieval, which is the image retrieving process using visual features. One of useful process in Content-Based Image Retrieval system is preprocessing in image clustering. This process has been treated for speeding up image retrieval in image database and improving accuracy. This final project uses Hierarchical Algorithm and Fast Genetic K-Means Algorithm in image clustering. The process is done with extracting the x-ray features which is have resized using Haar Wavelet, then clusterizing based on parts of body. Tests carried out with several scenarios to see the system from he influence of Fast Genetic K-Means operators to TWCV value and Content-Based Image Retrieval system evaluation values using precision and recall. The results of testing system, image clustering can be implemented using Hierarchical algorithm and Fast Genetic K-Means algorithm with 83,75% accuracy, precision 0,72925, and recall 0,711.

Keywords : *image, clustering, Fast Genetic K-Means, image retrieval, hierarchical*