

ABSTRACT

Content Based Image Retrieval (CBIR) is developed to retrieve images based on image information consisting of colors, shapes, and textures. CBIR consists of several major processes including preprocessing, feature extraction, indexing, and image recovery. One of the processes that play an important role in the process of rediscovery of images is the measurement of the similarity level of the image.

In this final project will be created a system capable of implementing feature extraction and measurement of image similarity. The first step is to do the preprocessing process by changing the image dimension and converting the image to grayscale. After the preprocessing phase is completed, the extraction process features Principal Component Analysis, the features obtained are then transformed into a weight matrix that will be used as a reference value on the Bayesian Network

The test result is the accuracy obtained reaching average 84,3% with training data and 53,66% for data testing. The most optimal principal component in the test is 250 pc for the train and 350 pc data for the test data. Tests on k-folding experiments have an effect on decreasing accuracy. The Bayesian Network method has better accuracy for classification.

Keyword : Bayesian Network, Principal Component Analysis