

ABSTRACT

In this research will be developed a software system that is able to classify the motives of batik through digital image processing. Diagnosis on batik motif image is done through texture feature extraction using Gray Level Co-occurrence Matrix (GLCM), and Artificial Neural Network method with Backpropagation architecture for classification process.

The testing process is carried out by performing feature extraction on batik motifs that have been obtained using the Gray Co-occurrence Matrix (GLCM) method which produces the GLCM matrix. Then each of the pre-processing images is divided into training images and test images. The training image is processed into statistics and stored as a database. Data from training images become a reference used to assess leaf pests through Backpropagation Artificial Neural Networks (ANN).

The system created in this study aims to identify and classify 4 Yogyakarta Batik motifs Parang, Nitik, Lereng, and Gurda with a comparison of training data and test data used, namely 80:20, 50:50, and 20:80. In this identification system the parameters used are 128×128 piksel images, angle 0° , 45° , 90° , and 135° , statistical characteristics of contrast, correlation, and homogeneity and the value of Hidden Layer at ANN of 50, 100, and 150, Epoch with values of 100, 200, and 250 obtained the highest accuracy in the comparison of training data and 80:20 test data, Hidden Layer 100, and Epoch 250 with a value of 89.285%. The results of this study are expected to be able to help batik business people to introduce batik motifs more easily.

Keywords : classification, batik, Gray Level Co-occurrence Matrix (GLCM), Artificial Neural Network