PALM TREE IDENTIFICATION OF AGE FCM USING TEXTURE BASED ON IMAGE PHOTO AIR

By

FITHROTUL MILLAH
09 621 074

Submitted to the Faculty of Engineering Informatics Program, University of Muhammadiyah Gresik on February 14th, 2014 to meet some of the requirements to obtain the degree of bachelor of S-1 Engineering Program Information.

ABSTRACT

The Development an advancement of Information Technology and considerable influence in the world of citra. Analysis image manipulation process is becoming increasingly easy to do, one reason is the emergence of a variety of methods citra. Image Segmentation is the first step doing image processing, pattern recognition, computer vision, and become the most important factor, sice most of the image processing depending on the result of operations enhancement or image enhacement process.

This final project will be implemented in the process of determining the type of palm tree using Fuzzy C-Mean method. Process improvements RGB image Greyscale, then proceed with normalization operation. After the normalization step further surgery is surgery histogram equalization. The process of feature extraction performed after image enhancement surgery using co-occurrence matrix. The process of feature extraction co- occurrence matrix produce 6 feature, among others, the value of angular second moment, contrast, correlation, variance, inverse different moment, and entropy. Fuzzy C-Means process is a process to classify a classes of data . There are two class used in the testing of this system. Namely of the Palm Trees Oil Palm Tree Young and Old. Determination of grouping classes based on the value of the degree of membership in each cluster of Square Euclidean calculation with the provisions of selecting the greatest value as a determinant of class grouping.

Based on these goals, then created system using the application program Matlab 2008b. Test carried out using a variety of image of the palm trees plantation sector in Kalimantan from aerial photographs taken later in the cropping for sample with 256x256 pixel size as much as 81.

***Keywords** : Image Clustering , Segmentation, Co-occurrence Matrix, Fuzzy C-Means.*

Supervisor : Mohammad Nuruddin, ST., M.T.
Co Supervisor : Soffiana Agustin S.Kom., M.Kom.