**IDENTIFIKASI MUTU BUAH NAGA MERAH *(Hylocereus Costaricensis)*
MENGGUNAKAN METODE K-NEAREST NEIGHBOR** *(Quality*
Identification Of Red Dragons (Hylocereus Costaricensis)
Using K-Nearest Neighbor Method)
Elly Antika, ST, M.Kom as a counselor

Novia Nurul Qomaril
Study Program of Informatics Engineering
Majoring of Information Technology
Program Studi Teknik Informatika
Jurusan Teknologi Informasi

ABSTRACT

The process of classifying the quality of dragon fruit (Hylocereus sp) in a conventional way using the visual of the human eye has weaknesses including requiring more energy to sort, different levels of human perception, the level of human consistency in assessing fruit quality is not guaranteed because humans can experience fatigue or human error. This study aims to design and develop a digital image processing program and the K-Nearest Neighbor algorithm for the classification of dragon fruit (Hylocereus Costaricensis) into two quality classes, namely class A and class B. Image processing uses color and texture characteristics. Color feature extraction uses Red, Green, Blue values that have gone through the image segmentation process. Texture feature extraction includes Contrast, Correlation, Energy, Homogeneity values obtained based on GLCM (Gray Level Co - Occurrence Matrix). In this study, several trials of K values were used, namely 1, 3, 5, 7, 9.

Key words : hylocereus costaricensis, image processing, k-nearest neighbor, glcm