Abstract

Clustering is one of data mining tecniques which already popular. This is because many problems in real life have been implemented by using this technique. Some examples that have been successfully implemented is for the case of weather forecasting, diagnosing diseases, and others.

In this thesis, the clustering technique applied to the area of iris segmentation using Fuzzy C-Means algorithm (FCM). This is done because at each pixel in a digital image has a color intensity which varies so that can be used clustering process to grouped of data which has same of characteristics.

In addition, this thesis is also performed clustering analysis of the results generated by the FCM algorithm using a score function method. This is done to see the level of validity of cluster as a clustering results that can be used as a reference to determine the optimal number of clusters.

Based on test results proved that FCM algorithm was successful to segment an iris areas with a good performance. It can be seen from the value produced by the metode of score function which almost reaches the maximum value (1) in the scale of real numbers from 0 to 1.

Keyword : digital image, Data Mining, Fuzzy C-Means, FCM, Clustering, Segmentation, Score Function.