

Abstract

Data is one of resources which used for gathering information. However, not all data working well. If the data have a complex structure, it is hard to understand. For example, data of customer invoice in PT.Telkom which used in this final project. This data have sum up the record is to lot of with the attributes amount which is there also many. Therefore, we need grouping process which is dividing data into slimmer amount so process the data analysing become progressively easy to. This Final Project is implements one of technique in data mining which is clustering to do grouping data. The clustering method that is used is Agglomerative Hierarchical Clustering (AHC). Agglomerative Hierarchical Clustering is a method of hierarchical clustering having the character of bottom up which is joining n cluster become one single cluster. This method has begin with placing each data object as one separate cluster (atomic cluster) and join that cluster-cluster become ones large cluster and bigger again until the last all of data object one in one single cluster. The keys from AHC method is calculation proximity between 2 cluster. This calculation is divisible become 3 which single linkage (shortest distance), complete linkage (longest distance) and average linkage (average distance). Because hierarchy method cannot result the cluster directly so we used a cophenetic distance method to analyse result of formed hierarchy. From result is in can indicate that Agglomerative Hierarchical Clustering (AHC) applicable to grouping data.

Keywords : *AHC, Single Linkage, Complete Linkage, Average Linkage, Clustering*