

ABSTRACT

The current use of electricity is still not monitored, apart from not being monitored, the use of this electricity in the Telkom University building is not monitored which buildings use the most electricity in the period per day, month and year Therefore, this data clustering of electricity usage can monitor electricity usage in the Telkom University building. It must be developed and realized in order to monitor the electricity usage.

In obtaining information on electricity usage in the Telkom University building, we collaborate with the IOT service center at Telkom University. Then the data is collected and stored in the database that we have created. Then the data is processed using the Agglomerative Hierarchical Clustering algorithm to get groups of electricity usage from the lowest to the highest. Testing the level of suitability of this algorithm using the test Silhouette Coefficient. The results of the study using the algorithm Agglomerative Hierarchical Clustering Resulted in the value of Silhouette Coefficient 1.00 on real data and 0.82 on device virtual data on may 2021. The results of the validity test get rCount is greater than rTable which is above 0.301 and reliability/R11 gets results, 0.883707 which is greater than 0.6, namely the comparison.

Keywords: Clustering, Electricity usage data, Agglomerative Hierarchical Clustering