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Data clustering requires accuracy and consistency to provide unbiased results. One of the most used methods is K-Means algorithm although it still has a fairly high error rate. The purpose of this research is to produce an accurate and consistent formulation in data cluster through K-Means modification named K-Means algorithm with Local Deviation Method (K-Means LDM). This study used credit of study load and study period (semester) variables from the data of two batch students totalling 1089 data. The data analysis includes a mean deviation of two tests for credit and semester variables as well as comparative test results of the two methods, namely the K-Means algorithm and K-Means LDM algorithm. The test result shows that the K-Means LDM algorithm may reduce the error with MSE 290.95 in the first and second tests, while the MSE value of the K-Means Algorithm is 508.54 in the first test and 881.13 in the second test. The result of the study suggests the use of K-Means LDM algorithm because it may reduce error index by 58.13% and is more accurate and consistent compared to the K-Means algorithm in the big data clustering process.

Keyword: K-Means, K-Means LDM, accuracy, cluster

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Accuracy of Data Cluster Using Modify K-Mean Algorithm by Local Deviation Method

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