



**PROJECT REPORT**  
**COMPARISON OF K-MEDOIDS AND FUZZY**  
**C-MEANS CLUSTERING ALGORIHTM TO PREDICT**  
**STUDENTS STUDY PERIOD**

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## ABSTRACT

*An on-time graduation rate is an important element for good accreditation. Therefore, it is necessary to monitor and evaluate the tendency of students to graduate on time or not. To overcome the above problems, help is needed from data mining that can predict the study period of students. K-Medoids and Fuzzy C-Means are clustering algorithms that can be used to predict student study period. The data used in this study is dummy data that is similar to the original data. The amount of dataset is 1000. The results of the algorithms used are evaluated using the Silhouette Index validation method so that the accuracy of the prediction can be known. The results of the method above in the K-Medoids algorithm of 1000 predicted students, there are 438 students who do not graduate on time and 562 students graduate on time. The results of the Fuzzy C-Means algorithm are 419 students who did not graduate on time and 581 students who graduated on time. The best results of the evaluation show that the K-Medoids algorithm has an accuracy of 62.54% and the Fuzzy C-Means algorithm has an accuracy of 63.85 %. Fuzzy C-Means algorithm is better at predicting student study period with an accuracy that is 1.31% higher than the K-Medoids algorithm.*

*Keyword: graduation on time, k-medoids, fuzzy c-means, silhouette index*

