ABSTRACT

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SELEKSI CALON PESERTA OLIMPIADE SAINS NASIONAL MENGGUNAKAN ALGORITMA K-MEANS CLUSTERING TERHADAP DATA MINING (STUDI KASUS : SMPN 195 JAKARTA)

The abundance of students causes the student data in the system to also be abundant. Schools often find it difficult to manage large amounts of data manually, especially in the selection of participants for the National Science Olympiad (OSN) and the decisions taken are less effective. The right method to use is Clustering with the K-Means algorithm on student report card score data and each value data is used as an attribute. The selected attributes are applied to get 3 student clusters for the selection of OSN participants, namely highly competent, competent and less competent students. This research can be used as a benchmark used by schools in making decisions on the selection of OSN participants. The results of this study indicate that the K-Means Algorithm is able to produce the selection and division of superior classes according to the students' ability scores. By using Rapid Miner software, the final result is Cluster 0 there are 32 students, Cluster 1 has 17 students, Cluster 2 has 23 students. By using Microsoft Excel software, the final result is Cluster 0 there are 25 students, Cluster 1 has 38 students, Cluster 2 has 9 students. The test results obtained, Cluster 0 is a cluster of students who are not competent to take part in OSN, in Cluster 1 is a cluster of students who are very competent to take part in OSN and in C2 a cluster of students who are competent but have not been able to take part in OSN.