

**ABSTRACT**

**APPLICATION OF K-MEANS CLUSTERING METHOD IN PREDICTING  
THE LEVEL OF EXTRACURRICULAR ENTHUSIASTS  
IN STUDENTS OF SENIOR HIGH SCHOOL MUHAMMADIYAH  
4 BENGKULU**

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*Extracurricular activities are additional activities carried out outside of class hours which are carried out either at school or outside school with the aim of gaining additional knowledge, skills and insights and helping to shape the character of students according to their respective interests and talents. The extracurricular activities at SMA Muhammadiyah 4 Bengkulu include 4 extracurricular activities, namely soccer, volleyball, futsal, and scouts. K-Means is one of the data mining methods that is without direction, meaning that this method is applied without training and without a teacher and does not require an output target. The system development method used is Waterfall, K-Means Clustering. The application of the implementation of the K-Means Clustering method in predicting the level of interest in extracurricular activities at SMA Muhammadiyah 4 Bengkulu students was built using the Visual Basic.Net 2010 programming language with the Ms.Access database. From the results of the implementation and testing of the application, it shows that the application can provide recommendations for clustering students' interests and talents for extracurricular activities at SMA 4 Muhammadiyah 4 of Bengkulu City which are input into the application properly.*

**Keywords:** *Data Mining, K-Means, Clustering, Extracurricular Activities*

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