

ABSTRACT

New Student Admission (PMB) is an annual routine agenda carried out by Telkom University Purwokerto in attracting prospective students. The data obtained from the PMB process is very diverse and has the potential to be analyzed more in order to support the implementation of promotional strategies that have a higher level of effectiveness. This study aims to cluster new student data using the K-Means Clustering algorithm, so that patterns can be found based on provincial origin, district / city origin, school origin, school status, where to know Telkom University Purwokerto, and the most frequently used social media. The method used refers to the stages of Knowledge Discovery in Database (KDD), starting from data collection, preprocessing, data transformation, to clustering analysis. Implementation is done using RapidMiner with 3 cluster parameters, and evaluation of clustering results refers to the Davies-Bouldin Index (DBI) value of 0.773. The analysis results show that each cluster has different characteristics, both in terms of geographic origin and information channels used by students in knowing Telkom University Purwokerto. . Based on these results, promotional strategies can be adjusted for each cluster, such as direct promotion to schools, utilization of social media, or alumni-based approaches. Thus, the application of K-Means Clustering provides significant benefits in the promotion decision-making process, as it is able to effectively cluster data to support a more efficient strategy.

Keywords: *KDD, k-means clustering, new student admissions, rapidminer, promotion strategy*