ABSTRACT

Based on the results of observations made at SMA Negeri 1 Singaparna, it was found that the graduation of students is fully held by the relevant educational unit. This policy has the potential to give full power to schools to influence student graduation based on subjective assessments. This problem can be overcome by systematic calculations for student graduation using data mining models. The graduation process in this study uses the C4.5 and Naïve Bayes algorithms. This study will compare the performance of the two algorithms. The results of the comparative analysis in this study show that the C4.5 algorithm shows a higher accuracy of 100% and produces an AUC value of 1. compared to the Naïve Bayes algorithm which shows an accuracy value of 92.74% with an AUC value of 0.9. The C4.5 algorithm is also visually superior in showing the relationship between attributes, while the Naïve Bayes algorithm visually shows no relationship between data attributes and is difficult to understand. The ROC curves of both algorithms show good classification performance. Both graphs are above the diagonal line and produce AUC values that fall into the Very Good Classification category.

Keywords: C4.5, Confusion Matrix, Naïve Bayes, Student Graduation