Abstract

One of the biggest challenges that faces by institutions of the higher education is to improve the quality of the educational system. This problem can be solved by managing student data at institutions of higher education to discover hidden patterns and knowledge by designing an information system. This study aims to designing an information system based on hybrid decision tree and naïve bayes classifier to predict the study period and predicate of graduated. The data are used in this research such as the Grade Point Average (GPA) from early 2 semesters, type of entrance examinations, origin of the high school, origin of the city, major in high school, gender, scholarship and relationship status amounting to 215 sets of data. The learning process is done by using hybrid of decision tree C4.5 algorithm and naïve bayes classifier with data partition 70%, 80% and 90%. The results found that using a 90% data partition gives a higher accuracy score of 72.73% in predicting the study period and predicate of graduation predicate.
References


Index Terms

Computer Science  Information Sciences

Keywords
Data mining, decision tree, naïve bayes classifier, NBTree, and student performance.