**Ranking of influencing factors in predicting students' academic performance.**

ABSTRACT

The aim of this study was to rank influencing factors that contribute to the prediction of students' academic performance. It is useful in identifying weak students who are likely to perform poorly in their studies. In this study, we used WEKA open source data mining tool to analyze attributes for predicting a higher learning institution's bachelor of computer science students' academic performance. The data set comprised of 2427 number of student records and 396 attributes of students registered between year 2000 and 2006. Preprocessing includes attribute importance analysis. We applied the data set to different classifiers (Bayes, trees or function) and obtained the accuracy of predicting the students' performance into either first-second-upper class or second-lower-third class. A cross-validation with 10 folds was used to evaluate the prediction accuracy. Our results showed the ranking of courses that has significant impact on predicting the students' overall academic results. In addition, we perform experiments comparing the performance of different classifiers and the result showed that Naïve Bayes, AODE and RBFNetwork classifiers scored the highest percentage of prediction accuracy of 95.29%.