A Comparative Study of Ensemble Methods for Students’ Performance Modeling

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Abstract

Student performance prediction is a great area of concern for educational institutions to prevent their students from failure by providing necessary support and counseling to complete their degree successfully. The scope of this research is to examine the accuracy of the ensemble techniques for predicting the student’s academic performance, particularly for four year engineering graduate program. To this end, five ensemble techniques based on four representative learning algorithms, namely Adaboost, Bagging, Random Forest and Rotation Forest have been used to construct and combine different number of ensembles. These four algorithms have been compared for the same number (ten) of base classifiers and the Rotation Forest is found to be the best ensemble classifiers for predicting the student performance at the initial stages of the degree program.

References

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- M. , Bahador B. Nooraei. , and Heffernan, Neil T. 2011. Ensembling Predictions of Student Knowledge within Intelligent Tutoring Systems, Joseph A. Konstan et al. (Eds.):

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