Predicting Student’s Performance in Education using Data Mining Techniques

Abstract

In this data world, where users spawn their digital footprint and generate a huge amount of unstructured data continuously with each activity, data mining techniques help in discovering interesting patterns, establishing relationships and unravel the problems through analysis, in different aspects of life. Educational data mining is a multidisciplinary research area, in which data from various educational organizations, is explored and made operational, for various facets concerned with the students, like predicting academic performance, analyse the learning pattern, solving e-learning issues, predict employability, visualize the critical courses affecting performance, investigate the reasons for student’s failure or drop out and thus make data-driven decisions to improve the institutions standards. This paper provides a brief overview of Data Mining tools and techniques, and its encroachment in the educational domain. It also proposes a simple framework using different variables which helps in predicting student’s academic success using two different algorithms: Decision Trees and Bayesian Network. Finally, a comparative analysis of accuracy is done. The results show that Bayesian Network outperforms the Decision Tress and gives better accuracy.
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Predicting Student’s Performance in Education using Data Mining Techniques

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Keywords

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