

An Insight into Machine Learning and Feature Selection Techniques for Predicting Academic Outcomes

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Abstract

Predictive analysis is done to predict and estimate the future outcomes and other future lying events. It is made up of various techniques such as data extraction, data scavenging, prediction and machine learning too. Predictive analysis is used in both business and education sectors. The target of this paper is to provide the results of the predictive analysis done using various techniques. Main facets of various feature selection approaches and different algorithms for selection are explained with their applications. Techniques used to predict student careers are provided below in the form of a table with their F-1 score, precision, recall and accuracy. This paper provides ample and indepth information to everyone who is interested to use predictive analysis in education sector. The study can result in providing insights into how predictive analytics can be applied in the education sector to enhance career guidance and support student success.

Keywords: ensemble learning, fuzzy art map, educational data mining, drop out prediction, predictive analysis