Discovering the Dropout Situations Using Statistical and Machine Learning Models

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Abstract

Dropping out of university is one of the serious issues of higher education in the public sector and in the private sector, notably in non-profit universities where the students should pay tuition fee. Moreover, in the state universities, where the Ministry of Science, Research and Technology pays the per capita for each student, it imposes economic losses on the government and the higher education system. This study aims to determine and classify the factors influencing student dropout using statistical and machine learning models and then identify and predict the dropout situations. To this end, Hormozgan University Educational System Database containing information on 6915 students at different educational levels between 2011 and 2015 was used. The data were analyzed using statistical learning models such as decision tree (base decision tree, random forest model, and boosting method), logistic regression and machine learning models such as neural network and support vector machine.

Speaker Publications:

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4. Minaei-Bidgoli, B., Hani, S.H., Ghanbari, V., "Data Mining in the E-Learning Systems: A Virtual University Case Study", International Journal of Information & Communication Technology Research (IJICTR), Vol. 4, No. 2, pp. 71-81, 2011.

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Biography:

Mahboobeh Zohourian Moftakhar Ahmadihas completed his Master of Statistics at the age of 27 years from Ferdowsi University. She is the Lecturer of the Education Office of Mashhad. She has published 1 paper in reputed conference.