Prediction of Learning Styles in University Students

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Abstract

This article aims to generate a model to automatically detect the learning styles of university students from their personal, academic data and use of mobile applications. The methodological design consists of collecting data from the students and their learning styles based on the proposal of Felder and Soloman. Next, a machine learning process generates a predictive model; R and RapidMiner are used for this analysis. A convenience sample was taken of students from the engineering and business areas. A mobile application was developed to obtain data in class. The study results are a model with a reduced number of questions that detect students' learning styles and make recommendations to teachers and managers to improve learning outcomes; this prediction enables rapid adjustment of teaching methods in a hybrid work environment.

Keywords
Prediction, learning styles, Felder and Soloman, and tertiary education

Biographies

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Ari Mariano-Melo is currently working in the Department of Production Engineering at the University of Brasilia. He is a professor in the professional master's degree in applied computing at the University of Brasília. His research includes Bibliometrics, Active Methodology, Consumer Behavior, Service Quality, and Multivariate Methods. He holds a MSc and a Ph.D. in Business from the University of Seville, Spain. He has been visiting Professor at the Catholic University of the North, Coquimbo (Chile).