عنوان مقاله:

An Integrated Improved DEA Model and Data Mining Technique in the Case of Educational System

محل انتشار:

نهمین کنفرانس ملی تحلیل پوششی داده ها (سال: 1396)

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خلاصه مقاله:

Traditional Data Envelopment Analysis (DEA) models haven't the ability of forecastingfuture efficiency of Decision Making Units (DMUs). Also they cannot determine details of factorsrelated to efficiency or inefficiency. So this paper proposes a hybrid prediction model consists ofimproved DEA model that presented in our previous research and Regression Tree (RT). Presentedmodel is conduct in three stages including Analytic Hierarchy Process - Assurance Region - JointMulti Data Envelopment (AHP- AR- Joint MLDEA) Model, bootstrapping and regression tree, inorder to try to eliminate mentioned weakness of DEA models. Experimental results on the real worldcase study show the goodness of predictive model based on simplicity and stability. Also the extractedrules of regression tree are very useful for future program planning.

کلمات کلیدی:

Analytic Hierarchy Process - Assurance Region - Joint Multi Data Envelopment Analysis(AHP- AR- Joint MLDEA), Nonparametric Regression, Regression Tree, bootstrapping, Educationalsystem

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