

عنوان مقاله:

Clustering Method in Road Safety Index Forecasting using Intelligent Nonlinear Approximators

محل انتشار:

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خلاصه مقاله:

This paper presents Intelligent Hybrid methods for forecasting the Road Safety Index that is based on a clustering method. The Road Safety Index is one of the most important problems in transportation, which is connected to road accidents directly. This is a vital problem because it's related to the health and economy of people seriously. Locations of road that these accidents occurred are a huge threat to the people's lives, so we should predict these places to prevent or diminish these accidents. Due to the fluctuation and nonlinearity of Road Safety Index, we should give an effective method to predict these accidents perfectly. The objective is to predict Safety Road Index accurately based on proposed hybrid models which combine Fuzzy-Cmeans, Artificial Neural Networks and Adaptive Neuro-Fuzzy Inference System. The significant advantages of this approach include higher accuracy, lower error value and more correlation coefficient. The results are calculated by the training and testing the proposed methodologies. The experimental results illustrate that these hybrid methods have a better response in comparison with the other conventional neural network models and neuro-fuzzy systems.

کلمات کلیدی:

Fuzzy-Cmeans, Artificial Neural Networks, Radial Basis Function Neural Networks, Adaptive Neuro-Fuzzy Inference System, Hybrid Intelligent Methods, Road Safety Index

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