Application of Artificial Neural Network Technique for Diagnosing Asthma

Authors : Azadeh Bashiri

Abstract : Introduction: Lack of proper diagnosis and inadequate treatment of asthma leads to physical and financial complications. This study aimed to use data mining techniques and creating a neural network intelligent system for diagnosis of asthma. Methods: The study population is the patients who had visited one of the Lung Clinics in Tehran. Data were analyzed using the SPSS statistical tool and the chi-square Pearson's coefficient was the basis of decision making for data ranking. The considered neural network is trained using back propagation learning technique. Results: According to the analysis performed by means of SPSS to select the top factors, 13 effective factors were selected, in different performances, data was mixed in various forms, so the different models were made for training the data and testing networks and in all different modes, the network was able to predict correctly 100% of all cases. Conclusion: Using data mining methods before the design structure of system, aimed to reduce the data dimension and the optimum choice of the data, will lead to a more accurate system. Therefore, considering the data mining approaches due to the nature of medical data is necessary.
Keywords : asthma, data mining, Artificial Neural Network, intelligent system
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