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Classification algorithms for predicting the risk of osteoporotic fracture

Hyunjo Kim
Gachon University, South Korea

The information technology may provide alternative approaches to osteoporosis disease diagnosis. This systematic review was performed to compare the diagnostic accuracy of vertebral fracture assessment. In this study, we examine the potential use of classification techniques on a massive volume of healthcare data, particularly in prediction of patients that may have osteoporosis through its risk factors. For this purpose, we propose to develop a new solution approach based on Random Forest decision tree to identify the osteoporosis cases. There has been no research in using the afore-mentioned algorithm for osteoporosis patients' prediction. The reduction of the attributes consists to enumerate dynamically the optimal subsets of the reduced attributes of high interest by reducing the degree of complexity. A computer-aided system is developed for this purpose. The performance of the proposed model in this study is analyzed and evaluated based on set of benchmark techniques applied in this classification problem.

hyunjo6763@gmail.com