Weighted Naive Bayes Classifier: A Predictive Model for Breast Cancer Detection

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Abstract

In this paper investigation of the performance criterion of a machine learning tool, Naive Bayes Classifier with a new weighted approach in classifying breast cancer is done. Naive Bayes is one of the most effective classification algorithms. In many decision making system, ranking performance is an interesting and desirable concept than just classification. So to extend traditional Naive Bayes, and to improve its performance, weighted concept is incorporated. Exploration of Domain knowledge based weight assignment on UCI machine learning repository dataset of breast cancer is performed. As Breast cancer is considered to be second leading cause of death in women today. The experiments show that a weighted naive bayes approach outperforms naive bayes.

References

on Data Mining.


**Index Terms**

Computer Science    Biomedical
Keywords

Data Mining, Breast cancer, Naive bayes classifier, Domain based weight, Weights, Posterior probability, UCI machine learning repository, Prediction.