Abstract

In multilabel classification each example is represented with features and associated with multiple labels. Multilabel classification aims to predict set of labels for unseen instances. Researchers have developed multilabel classification using both the problem transformation approach and algorithm adaptation approach. An algorithm called ML-kNN that follows algorithm adaptation approach has been developed and being used to perform multilabel classification. However it does not considers label correlation and thus results in lesser prediction accuracy. A new approach called CML-kNN reported in the literature exploits label correlation using both Intra-Coupling and Inter-Coupling label similarities between the labels to provide better accuracy than that of ML-kNN, but curse of dimensionality is the great challenges in multilabel data. So to address this problem a new approach called CML-kNN with feature selection is presented in this work. The basic idea of this work is to investigate the performance
of CML-kNN with and without feature selection. The experiments indicate that proposed CML-kNN with feature selection method achieves superior performance than existing CML-kNN method.

References

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Index Terms
Keywords
Algorithm Adaptation  K Nearest Neighbor  Label Correlation  Ml-knn  Multilabel Classification