Abstract

An algorithm called Random k-labelsets (RAkEL) follows problem transformation approach of multi-label classification and uses Label powerset (LP) classifier. RAkEL assumes equal weightage for each labelset. This drawback is overcome by Generalized k-labelset ensemble (GLE) method that advocates the basis expansion model to train LP classifier on random k labelset. To reduce global error between ground truth and estimate, expansion coefficients are learned by GLE. GLE is further extended to solve multi label misclassification problem. As reported in literature, using Fuzzy rule classifier (FURIA) as a base classifier for problem transformation methods gives the competitive results compared with other rule based classifiers. The base classifier used in GLE is LIBSVM, it uses crisp values. This work aims at implementation of GLE and tests its performance using crisp classifier and fuzzy rule classifier as a base classifier. It is expected that using fuzzy rule classifier performance of GLE would be
improved.

References


Index Terms

Computer Science

Fuzzy Systems

Keywords

Multi-label Classification, Rakel, Gle, Fuzzy Rule Classifier.