Abstract

Error correcting output code (ECOC) is a general framework of solving a multiclass classification problem via a binary class classifier ensemble. In this paper, a new enhanced heuristic coding method, based on ECOC (RACS-ECOC) is proposed. It reiterates the following three steps until the training risk converges. The first step employs the layered clustering-based approach [1]. The approach can construct multiple different strong binary class classifiers on a given binary-class problem, so that the heuristic training process will not be stopped by some difficult binary-class problems. The second measure is the weight optimization technique [2]. It ensures the non-increasing of the heuristic training process whenever a new classifier added to the ECOC ensemble. [3], here a survey and analysis of various techniques in classification and how the ECOC technique performs best among existing techniques.

In propose work instead of weighted optimization technique we would further like to work on recursive ant optimization scheme for classification
Racs based Weight Optimization and Layered Clustering-based ECOC

References

1. Xiao Lie Zhang “Heuristic Ternary error correcting output codes via weighted optimization and layer clustering based approach" IEEE Transactions on cybernetics, VOL. 45, NO. 2, February 2015

Index Terms

Computer Science

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Keywords
Classifier ensemble, error correcting output codes, multiple classifier systems, multiclass classification problem.