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**Combining diverse one-class classifiers.**

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Summary: Multiple Classifier Systems (MCSs) are the focus of intense research and a large variety of methods have been developed in order to exploit strengths of individual classifiers. In this paper we address the problem how to implement a multi-class classifier by an ensemble of one-class classifiers. To improve the performance of a compound classifier, different individual classifiers (which may e.g., differ in complexity, type, training algorithm or other) can be combined and that could increase its both performance, and robustness. The model of one-class classifiers is dedicated to recognize one class only, therefore it is a quite difficult to produce MCSs on the basis of it. One of the important problem is how to ensure diversity of classifier ensemble which consists of one-class classifiers. Well-known diversity measures have been developed for committees of multiclass classifiers. In this work we propose a novel diversity measure which can be applied to a set of one-class classifiers. Additionally we propose a classifier fusion model dedicated to one-class classifiers, which allows more than one classifier per class. We will try answer the question if increasing number of individual one-class classifier has an impact on quality of MCS. The proposed model was evaluated by computer experiments and their results prove that proposed model can outperform well known fusion methods.

*Keywords:* pattern recognition; machine learning; one-class classification; classifier ensemble; diversity measure
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