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图形、图像、模式识别

基于GA的多分类器融合算法

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摘要 为了提高单一分类器的识别性能，在模式识别领域经常采用多分类器集成的方法。提出了一种基于GA的多分类器融合算法，首先通过GA算法对特征集的分割进行优化选择，形成了较优的成员分类器；然后通过对成员分类器分辨能力的度量，提出了一种加权系数矩阵的多分类器组合方法。在UCI数据库上进行了实验，结果表明所提出的算法具有较高的识别率。

关键词 多分类器融合 遗传算法 加权系数矩阵

分类号 TP391

Multiple classifiers fusion algorithm based on GA

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Abstract

In order to improve the performance of single classifier，multi-classifier fusion methods have been widely used.This paper gives a new multi-classifiers fusion algorithm based on GA.To begin with，the genetic algorithm is used to partition the feature set into subsets of features for generating member classifiers，and then a new multi-classifier combining method based on weighted coefficient matrix is proposed according to the concept of class distinguishing ability presented by us.Experiments with UCI datasets show that the performance of the proposed algorithm is improved with high correct recognition rate.

Key words multi-classifiers fusion genetic algorithm weighted coefficient matrix

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