

数据库与信息处理

一种新的基于AUC的多类分类评估方法

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摘要 基于ROC曲线分析的AUC方法最初用于评估二类分类, 不能直接解决多类别的评估, 如何有效地将其推广到多类别评估中是研究的热点问题。首先介绍一种基于一对多方法的多类别AUC评估方法F-AUC, 在此基础上根据二叉树的构造思想提出一种新的多类别评估方法B-AUC。该方法在MBNC实验平台上编程实现, 并和F-AUC方法进行比较和分析, 结果表明该方法是可行的, 在评估效果和速度效果上有良好的性能。

关键词 [分类评估](#) [二类分类](#) [多类分类](#) [二叉树](#)

分类号

New multiple-classifier appraisal method based on AUC

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Abstract

The AUC method which based on ROC analysis is used to appraise two-classifier, cannot directly solve the appraisal of multiple-classifier, How effectively promoting it to the multiple-classifier appraisal is a hot topic in research area. This article first introduced a multi-class AUC appraisal method F-AUC which based on one against rest method. Then according to this foundation a new multi-class appraisal method B-AUC which based on the structure principle of binary tree was proposed. Making experiment in MBNC experiment platform, analyzing and comparing two methods, the results show that the new method not only is feasible, has the good performances in the appraisal effect and the speed effect.

Key words [classified appraisal](#) [two-classifier](#) [multiple-classifier](#) [binary tree](#)

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