

A Hybrid Incremental Clustering Method—Combining Support Vector Machine  
and Enhanced Clustering by Committee Clustering Algorithm

邱登裕, 謝岡陵

Information Management

Computer Science and Informatics

chiuden@chu.edu.tw

Abstract

In the study, a new hybrid incremental clustering method is proposed in combination with Support Vector Machine (SVM) and enhanced Clustering by Committee (CBC) algorithm. SVM classifies the incoming document to see if it belongs to the existing classes. Then the enhanced CBC algorithm is used to cluster the unclassified documents. SVM can significantly reduce the amount of calculation and the noise of clustering. The enhanced CBC algorithm can effectively control the number of clusters, improve performance and allow the number of classes to grow gradually based on the structure of current classes without clustering all of documents again. In empirical results, the proposed method outperforms the enhanced CBC clustering method and other algorithms. Also, the enhanced CBC clustering method outperforms original CBC.

Keyword :