

Editorial

Dear Colleague:

Welcome to Volume 5(4) of the journal *Intelligent Data Analysis*!

Volume 5(4) of IDA consists of five articles. Following are some of the highlights of this issue of our journal.

In the first article, Lazarevic and Obradovic propose an adaptive attribute boosting technique to combine models from multiple classifiers each providing different set of attributes. In this approach, instead of a single global classifier for each boosting round, specialized classifiers related to each heterogeneous region are introduced. Their results showed improvements in prediction accuracy using both synthetic and real data. In the second article, which is about mining association rules using clustering, Liu, Lu and Lu introduce a new algorithm that simplifies the process of discovering association rules in large data sets. Their approach is based on partitioning cases into clusters and then mining association rules from summaries of clusters. Their results showed that their algorithm can learn association rules more efficiently in a single database pass.

Chen et al., in the next article, present the results of their investigation into the problem of item clustering in large transactional databases. Focusing on large item sets, they introduce a similarity measure between the items which captures the co-occurrence relationship and is not sensitive to noise. This approach does not require the users to predetermine the threshold of parameters. In the fourth article of this issue, Tay and Cao propose a two stage neural network architecture which is based on combining support vector machines (SVM) with self-organizing feature maps (SOM). They first use SOM as a clustering algorithm to partition the data. Multiple SVMs that best fit each cluster are then constructed through finding the most appropriate set of parameters. Their approach has shown high prediction performance and fast convergence speed.

The last article of this issue by Kwak, Ventura and Tofang-Sazi is an application paper that describes the process of automated defect inspection and classification of leather fabric. Their approach is based on a combination of geometric and statistical features, a normalized compactness measure and first and second order statistical features. This approach utilizes a sequential classifier to classify all defects. An overall accuracy of 91.25

And finally, the five articles in this issue of IDA are a combination of theoretical and applied research work performed in the field of Intelligent Data Analysis. Our goal is to combine articles from both types of research so that we can report on the latest developments in the real world applications of IDA techniques. We would be happy to hear your feedback. Thanks for your continuing support.

Best wishes,

A. Famili
Editor-in-Chief