Abstract

Prominence of data streams has dragged the interest of many researchers in the recent past. Mining associative rules generated on data streams for prediction has raised greater research interest in recent years. Associative classification mining has shown better performance over many former classification techniques in Data Mining and Data Stream Mining domains. This paper introduces a new technique for mining data streams using associative classification. To the best of our knowledge there are only few techniques existing. We designed a compact data structure to efficiently maintain data streams without losing any important information. We present a PSToSW for mining rules from the tree. Subsequently, an optimized algorithm called PSToSWMiner is proposed for mining a classifier which contains set of high qualified classification rules. We then conduct experiments using synthetic and real data sets to assess the performance of our approach. The experimental results show that our technique is superior to existing algorithms which perform similar tasks in terms of accuracy of prediction and run time efficiency.
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Index Terms

Computer Science

Communication
Keywords
Data Streams  Sliding window  Associative Classification  Frequent item sets.