Abstract

Periodic Pattern Mining, an interdisciplinary field of data mining is concerned with analyzing large volumes of time series or temporal data to discover patterns or trends or certain characteristics of data automatically. Temporal data captures the evolution of a data value over time. The existing Periodicity Mining Process is Text-Based which can be applied only to text data. The project proposed deals with the Periodic Patterns in Multimedia Data which includes text as well as audio and images. Multimedia data such as digital images and audio can be treated as temporal values, since a timestamp is implicitly attached to every instant of the signal. A Cross Correlation based approach is proposed for periodic mining of multimedia data.
which has its main application in pattern recognition. In multimedia data mining, when the same
signal is compared to phase shifted copies of itself, the procedure is known as autocorrelation
Basically Cross Correlation is a mathematical tool for finding repeating patterns in periodic
signals by analyzing the degree of similarity between them. The periodic pattern retrieved from
text data has its application in prediction, forecasting and detection of anomalies or unusual
activities. The patterns extracted from audio and image finds its application in content based
retrieval, compression and segmentation.

References

- Jiawei Han and Micheline Kamber, University of Illinois at Urbana-Champaign, "Data Mining Concepts and Techniques"; Morgan Kaufmann Publishers, 2006.

**Index Terms**

Computer Science  
Emerging Trends in Technology

**Keywords**

Auto-correlation  
Cross Correlation  
Compression  
Content Based Retrieval  
Periodic Pattern Mining  
Segmentation  
Time Series Data