Parallel dimensionality reduction transformation for time-series data

Thanh H.C.
Department of Informatics, Hanoi University of Science, VNUH 334 - Nguyen Trai Rd., Hanoi, Viet Nam

Abstract: The subsequence matching in large timeseries databases has been being an interesting problem. Many methods have been proposed that cope with this problem in an adequate extend. One of good ideas is reducing properly the dimensionality of time-series data. In this paper, we propose a method to reduce the dimensionality of high-dimensional timeseries data. The method is simpler than existing ones based on the discrete Fourier transform and the discrete cosine transform. Furthermore, our dimensionality reduction may be executed in parallel. It preserves planar geometric blocks and may be applied to minimum bounding rectangles as well. © 2009 IEEE.
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Authors with affiliations:

• Thanh, H.C., Department of Informatics, Hanoi University of Science, VNUH 334 - Nguyen Trai Rd., Hanoi, Viet Nam

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