Abstract

Compare the similarity of time series is a key for most tasks and there are various similarity measures which measure the similarity of time series. Similarity measures are the basis of time series research, they are quite important for improving the efficiency and accuracy of the time series pattern recognition tasks. Therefore selection the best similarity measures are very essential. On this issue, in this paper an analytical framework for elastic similarity measures based time series pattern recognition as, FESM for short, is proposed. FESM consists of three main components: 1) Classification of elastic similarity measures of time series, 2) Comparative evaluation of classified similarity measures based on proposed qualitative evaluation criteria, and 3) Application scopes of classified similarity measures. FESM will be proper for the quick understanding and comparing of time series similarity measures, and selection the best of existing similarity measures for respective time series pattern recognition tasks.

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Proceedings First International Workshop on Crowd Simulation, vol. 3. pp.7

Index Terms

Computer Science

Pattern Recognition

Keywords

Time Series, Pattern Recognition, Elastic Similarity Measures.