

Investigation on Performance of Change Point Algorithm in Time Series Dynamical Regimes and Effect of Data Characteristics

Authors : Farhad Asadi, Mohammad Javad Mollakazemi

Abstract : In this paper, Bayesian online inference in models of data series are constructed by change-points algorithm, which separated the observed time series into independent series and study the change and variation of the regime of the data with related statistical characteristics. variation of statistical characteristics of time series data often represent separated phenomena in the some dynamical system, like a change in state of brain dynamical reflected in EEG signal data measurement or a change in important regime of data in many dynamical system. In this paper, prediction algorithm for studying change point location in some time series data is simulated. It is verified that pattern of proposed distribution of data has important factor on simpler and smother fluctuation of hazard rate parameter and also for better identification of change point locations. Finally, the conditions of how the time series distribution effect on factors in this approach are explained and validated with different time series databases for some dynamical system.

Keywords : time series, fluctuation in statistical characteristics, optimal learning, change-point algorithm

Conference Title : ICBCBBE 2014 : International Conference on Bioinformatics, Computational Biology and Biomedical Engineering

Conference Location : Istanbul, Türkiye

Conference Dates : October 27-28, 2014