

Global and Local Bursts Detection in Streaming Data

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Identifying and analyzing peaks in given data stream is valuable for many real time applications. The abnormal activities in network, sudden increase in price/volume and sharp rise in demands are discovered by detecting peaks in real time stream. To devise algorithms to automatically detect peaks in any given streaming data, formalized ways of peak notation is needed. An unexpectedly large number of frequencies occurring within some certain measurement are called a burst. Thus the nature of peak detection is similar to burst detection in this study because threshold based bursts detection is used. The burst detection is the maximum number of frequency of words per interval of time. The local burst in streaming data means data point which has large and locally high frequency value within time period which called windows. It is also isolated because it has not too many points in the window which have similar values. Not all local bursts are true burst; a local burst is a true burst if it is a reasonably large value even in the global context. Bursts come up in many natural and social processes. It is a challenging task to monitor the occurrence of bursts whose lasting duration is unknown in a fast data stream environment. We present a greedy dynamic detection algorithm which monitors sampling time window size by proportionally the rate of data arrival. It evolves the adaptive methods to adapt sampling time window size and burst defines thresholds to define local burst.