

Extracting Emerging Patterns with Change Detection in Time for Data Streams

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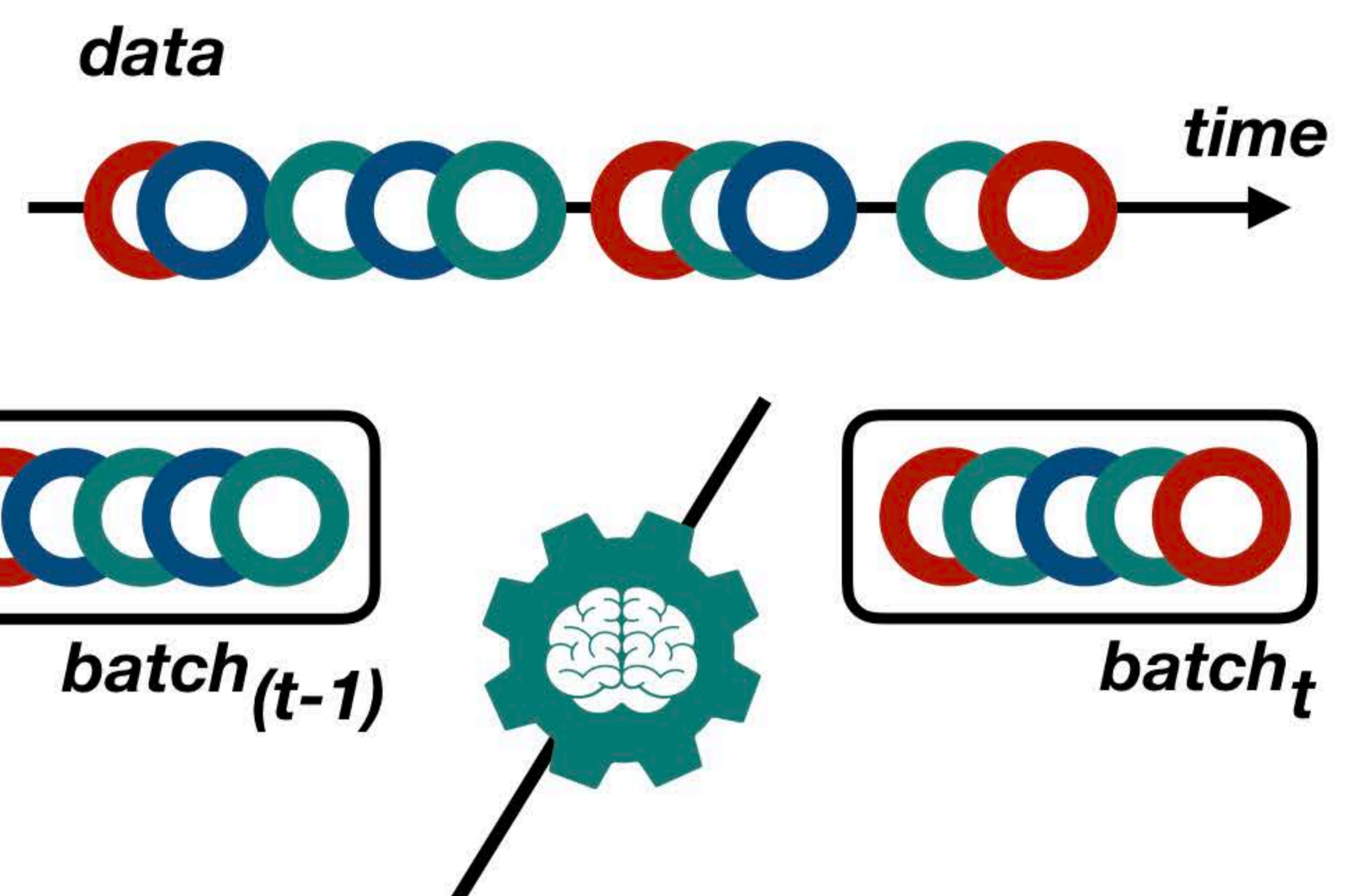
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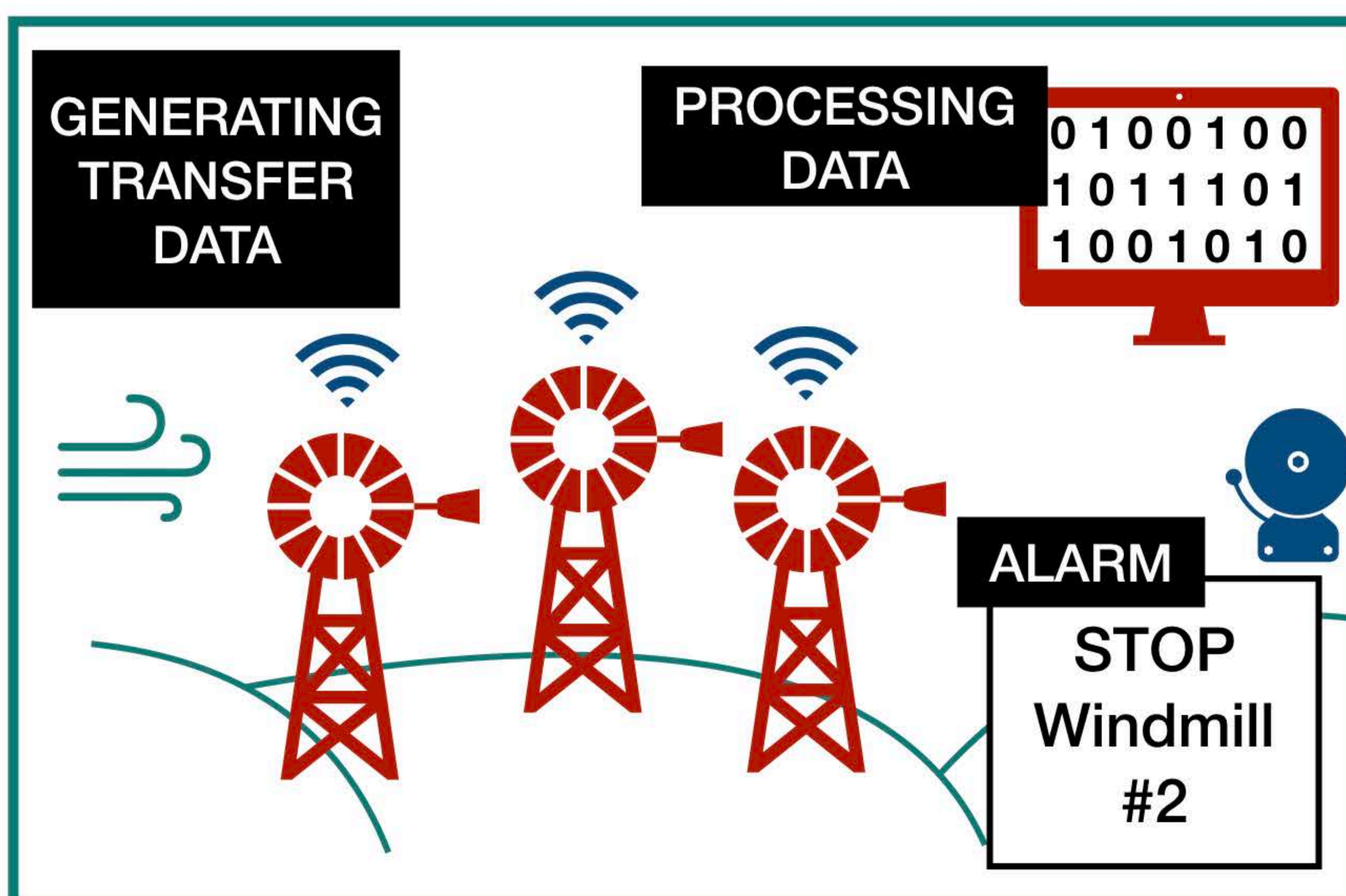
Emerging pattern mining attempts to search for itemsets whose support increases significantly from one dataset to another. On the other hand, **change detection** consists of finding all emerging patterns between datasets which are collected at a different time.

A **data stream** is, by definition, an unbounded, ordered sequence of instances that arrives at the system throughout time at a variable speed.

In this contribution, we present the adaptation from emerging patterns to change mining in data streams environments. The objective is to **extract rules in order to describe emerging behaviour between different time instants.**



Different devices in a wind turbine farm are generating data in a stream. Data center is analysing these data as they arrive to the system. It is able to analyse data with respect to time in order to search for change detection, and system launches alarms considering the knowledge extracted. The number 2 must be stopped due to a possible error in the mechanism with respect to the meteorological conditions and/or the performance of the remaining windmills.



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