**201510056 Zeynep Köse**

**CME 4432 APPLICATIONS OF DECISION SUPPORT SYSTEMS QUİZ 9**

**Summarize Articles About Stream Mining**

1. Data stream mining techniques: a review

The information technology revolution has created an enormous flow of data. Mining stream data in real time is required to obtain valuable information. Some real-time clustering and classification data stream mining techniques are applied in this article.

Stream Clustering Techniques; Partitioning Method, Density-based Method, Hierarchical Method, Model-based Method. For partitioning algorithms, defining the correct (k) clusters for a developing stream data affects the quality of the clusters.

Stream Classification Techniques; Tree-based, Rule-based, Ensemble-based, Nearest Neighbors, Statistical. Classification techniques for data streams have different issues as they deal with non-stationary data. The major issue for stream classification techniques is addressing the drift concept, as the learning model needs to be able to update itself once a change has occurred.

Main challenges of streaming data mining techniques;

* Infinite Stream: This challenge addresses the memory requirement for processing this continues huge streams of data.
* High Speed: Because of high speed of this type of data, the processing response needs to be fast and prompt in real time.
* Evolvement with Time: This influences the processing of new items that arrives in different timing.
* Multidimensionality: Dealing with multidimensional data stream has high computation costs. It is important to reduce these costs by new effective techniques that reduce the multidimensional of stream data.

In this survey article, classification and clustering techniques for data flow are examined.

1. Survey Paper on Various Challenges in Data Stream Mining

Large volumes of data can be mined for interesting and relevant information in a wide variety of applications. When the volume of the underlying data is very large, it leads to a number of challenges: Concept Drift, Skewness, Delayed and incomplete information.

Stream Mining is the process of extracting knowledge from continuous flow of data which comes to the system in a stream. After a lot of research, data mining has become a well established field now, the data stream problem poses a number of challenges which are not easily solved by traditional data mining methods.

This article discusses several challenges associated with dataflow mining and the need to overcome them.

References

[1] Alothali, E., Alashwal, H., & Harous, S. (2019). Data stream mining techniques: a review. *Telkomnika*, *17*(2), 728-737.

[2] Ghongade, A., Dsa, A., Munot, H., & Lokhande, P. Survey Paper on Various Challenges in Data Stream Mining.