

## **A NOVEL DATA STREAM CLUSTERING ALGORITHM IN HEALTHCARE IOT**

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### **ABSTRACT:**

The Internet of Things (IoT) is going ahead to creating direction to make seals integration of network information and physical object. As an important technique of data analysis, clustering attempts to find the underlying pattern structures embedded in unlabeled information. Unfortunately, most of current clustering techniques that could only deal with static data become infeasible to cluster a significant volume of data in the dynamic industrial applications. We propose a method which determines how many different clusters can be found in a stream based on the data distribution in healthcare application. After selecting the number of clusters, we use an online clustering mechanism to cluster the incoming data from the streams. In the proposed algorithm, two cluster operations, namely cluster creating(initialization Buckets) and cluster merging, are defined to integrate the current pattern into the previous one for the final clustering result and k-medicos is employed to modify the clustering centers according to the new arriving objects. Finally, experiments are conducted to validate the proposed scheme on two cases in terms of clustering accuracy and computational time.

**KEYWORDS:** Iot, Stream Clustering, Healthcare, Buckets