

MACHINE LEARNING FOR DATA STREAMS

ENSEMBLE

- Ensemble methods can also be considered as blind approaches. In fact, the general technique applied by these methods is that the data stream is divided into sequential blocks of fixed size, and each of these blocks is used to train a classifier. The ensemble is continuously refined by adding a new classifier, removing the oldest or the weakest classifier, increasing or decreasing the classifier weights using some criteria usually based on current data block performance. (Paper “Classifying evolving data streams with partially labeled data (2011)”)

1. Mining recurring concepts in a dynamic feature space_MReC-DFS (2014):

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RESUMEN MReC-DFS (RGBNC): They utilized the Naive Bayes (NB) algorithm with ensemble weighting mechanism to handle the recurring concept drift for data stream classification. In their method, the ensemble weight mechanism considered the accuracy and error values

Due to the dynamic nature of data, classes and data samples are not constant over the period of time. So, considering accuracy and error may affect the performance of the classification if one class attribute has bigger data samples. So, the multiple objective criteria like, sensitivity, specificity should be included to ensemble weighting.