

Figure 1. A General Framework of Concept Drift Handling [1]

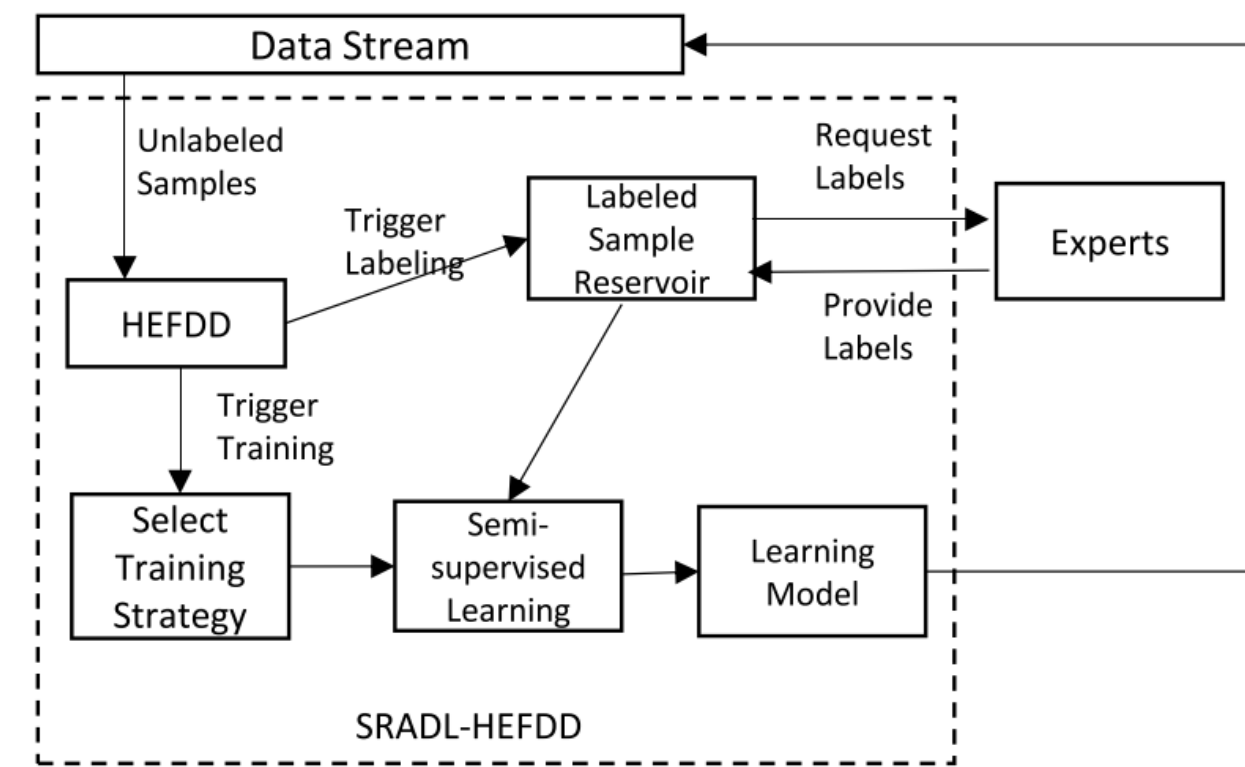


Figure 7.1. Overview of SRADL-HEFDD

FIGURE 2 Flow chart for a common data stream classification framework

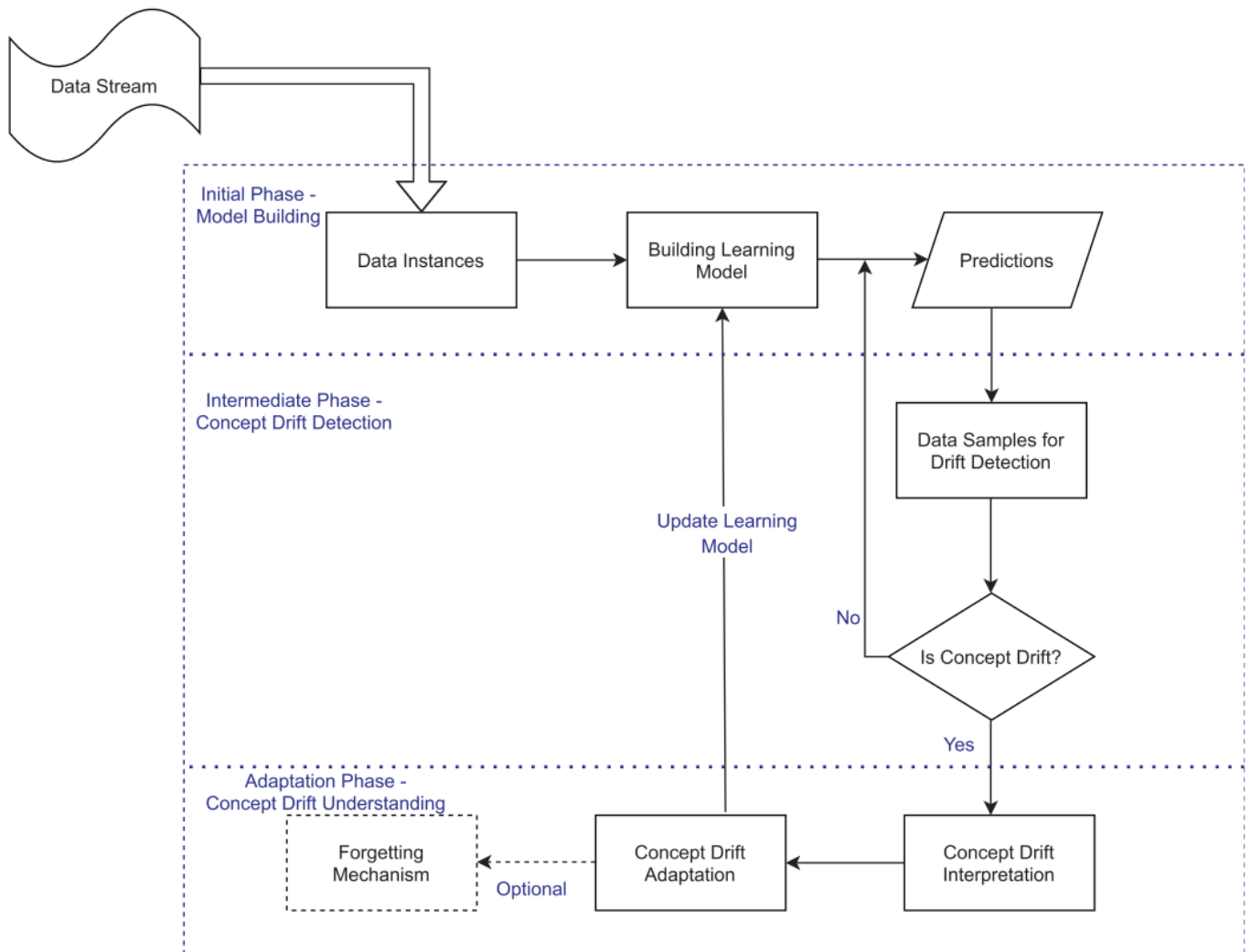
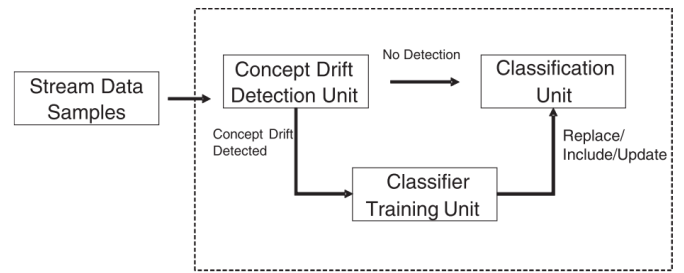


Fig. 5. General block diagram of concept drift detection.

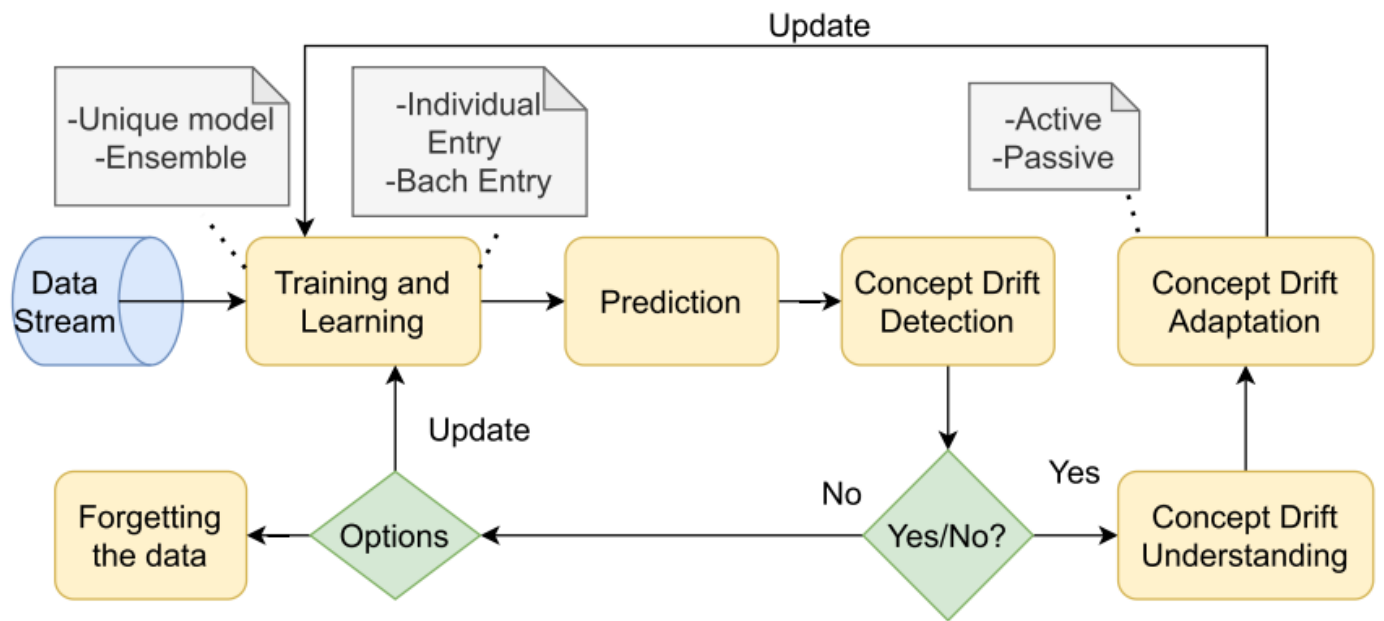


FIGURE 2. Generic approach to learning with CD. Adapted [17].

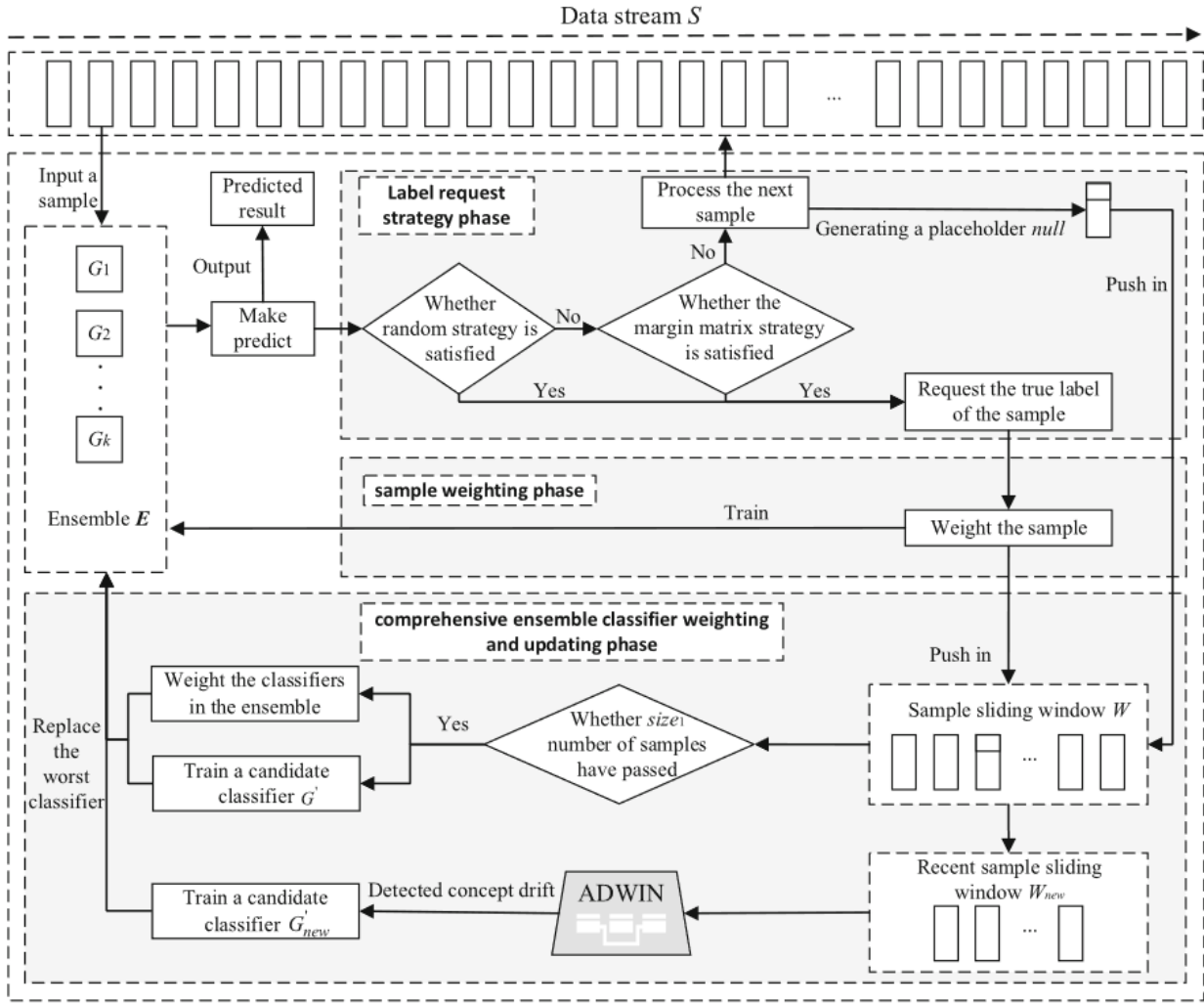


Fig. 2 Framework of OALM-MI

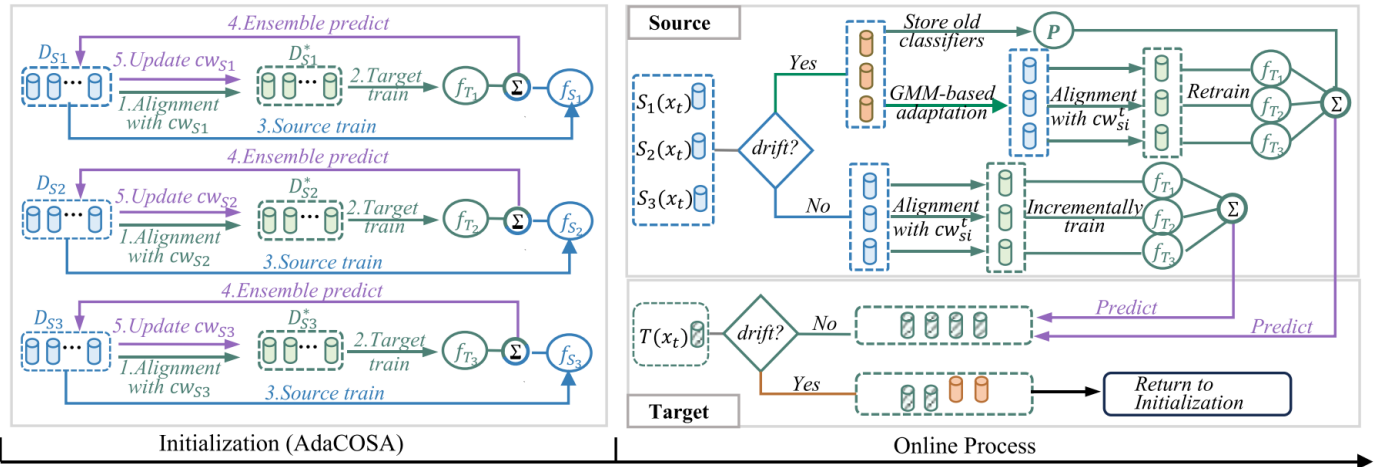


Figure 1: Framework of OBAL. The initialization stage is principally devoted to mitigating the problem of covariate shift, along with learning the intricate dynamic correlations that exist between various data streams. In the online phase, the core focus is on the detection and adaptation of asynchronous drift. This stage further integrates the covariate shift alignment and correlation matrices learned during the initial phase, facilitating a seamless ensemble prediction from the source to the target stream.

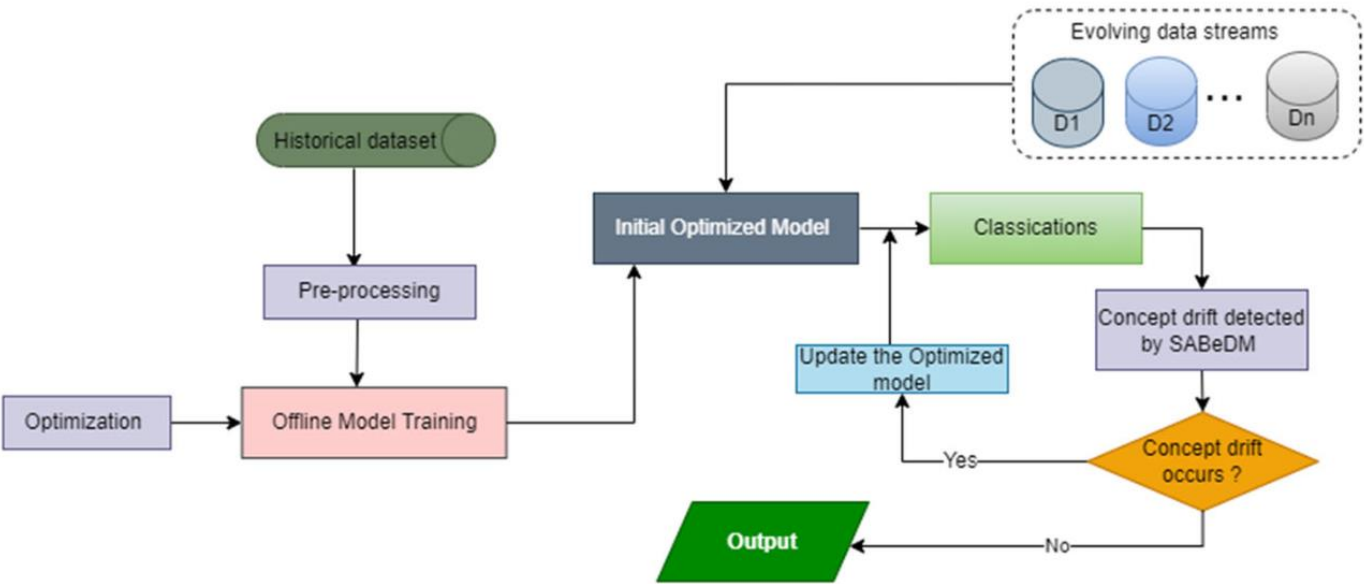


Fig. 1 The proposed SABeDM framework

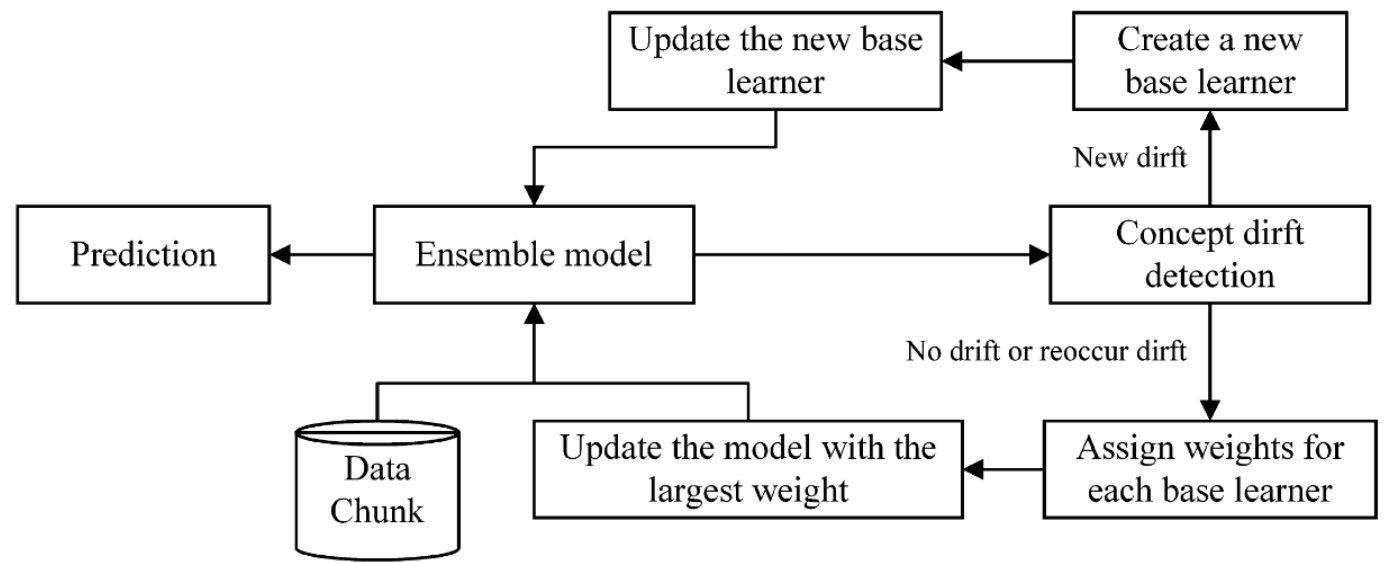


Fig. 4. The process of DSW-EFS.

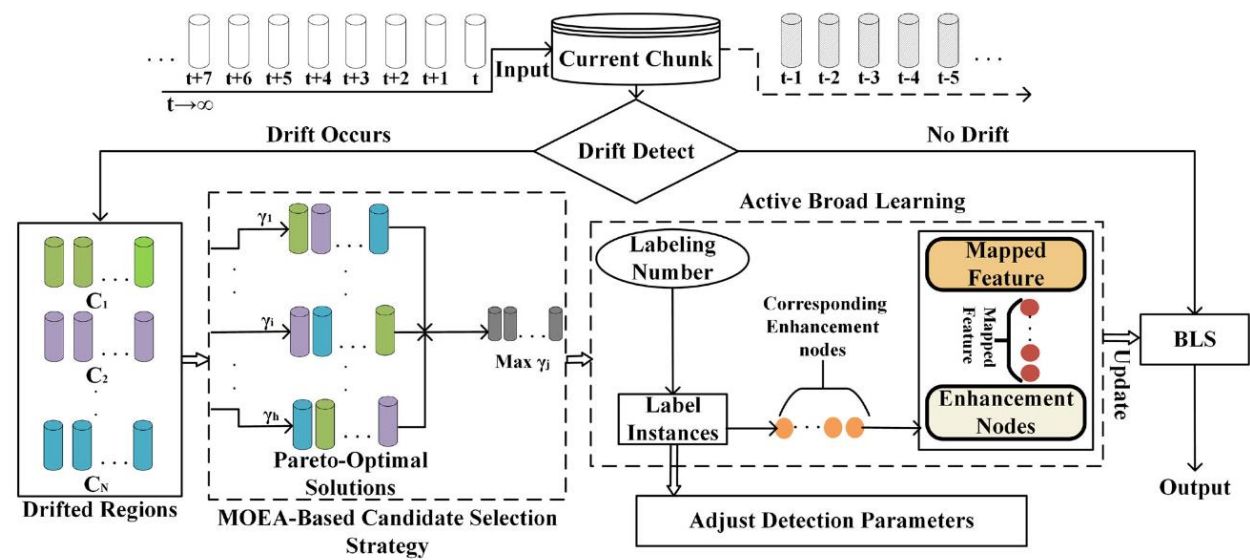


Fig.2 The flowchart of MOE-ABLS

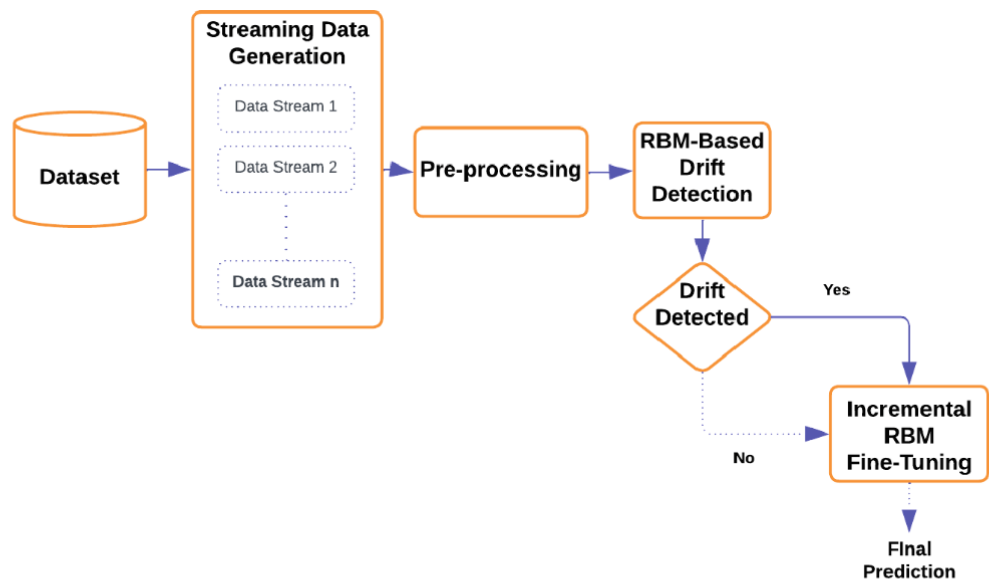


Fig.1. IRBM: Incremental Restricted Boltzmann Machines for Concept Drift Detection and Adaption

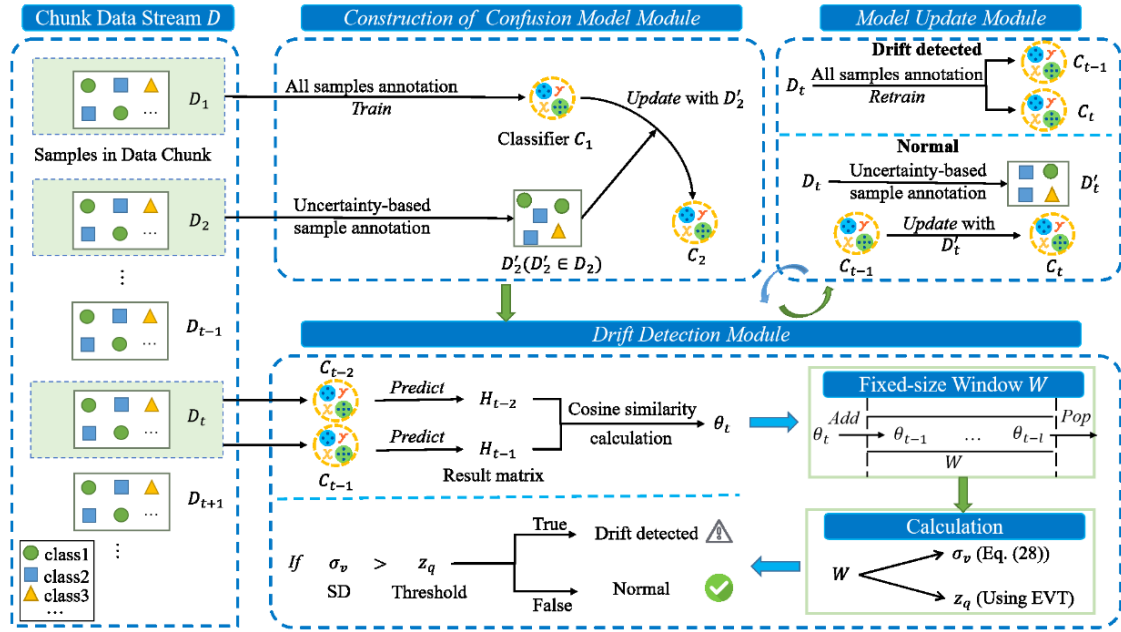


Fig. 1. Flowchart of CADM+ framework. *Construction of confusion model module* updates an existing classifier with a new set of labeled data to obtain a new model, aiming to generate a confusion model. In *drift detection module*, upon the arrival of a new data chunk, the classifiers before and after the incremental update will utilize the unlabeled data within it to calculate the cosine similarity. The resulting cosine similarity is then incorporated into a sliding window to compute the concept drift detection metric and threshold. In *model update module*, if the concept drift is detected, all samples in the data chunk are labeled, and the classifier is retrained. Otherwise, part of the samples are selected for annotation to update the model. Subsequently, the detection and update modules iterate in a loop.

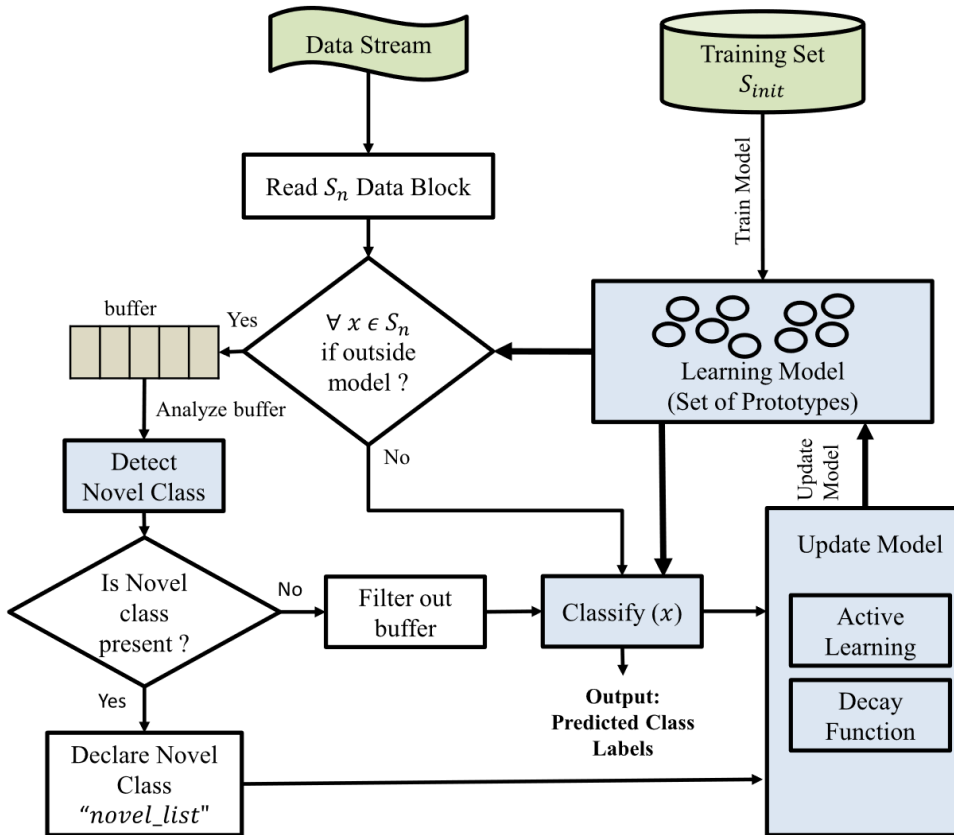


Fig. 2. Overview of adaptive data-driven prototype-based learning for evolving data streams.

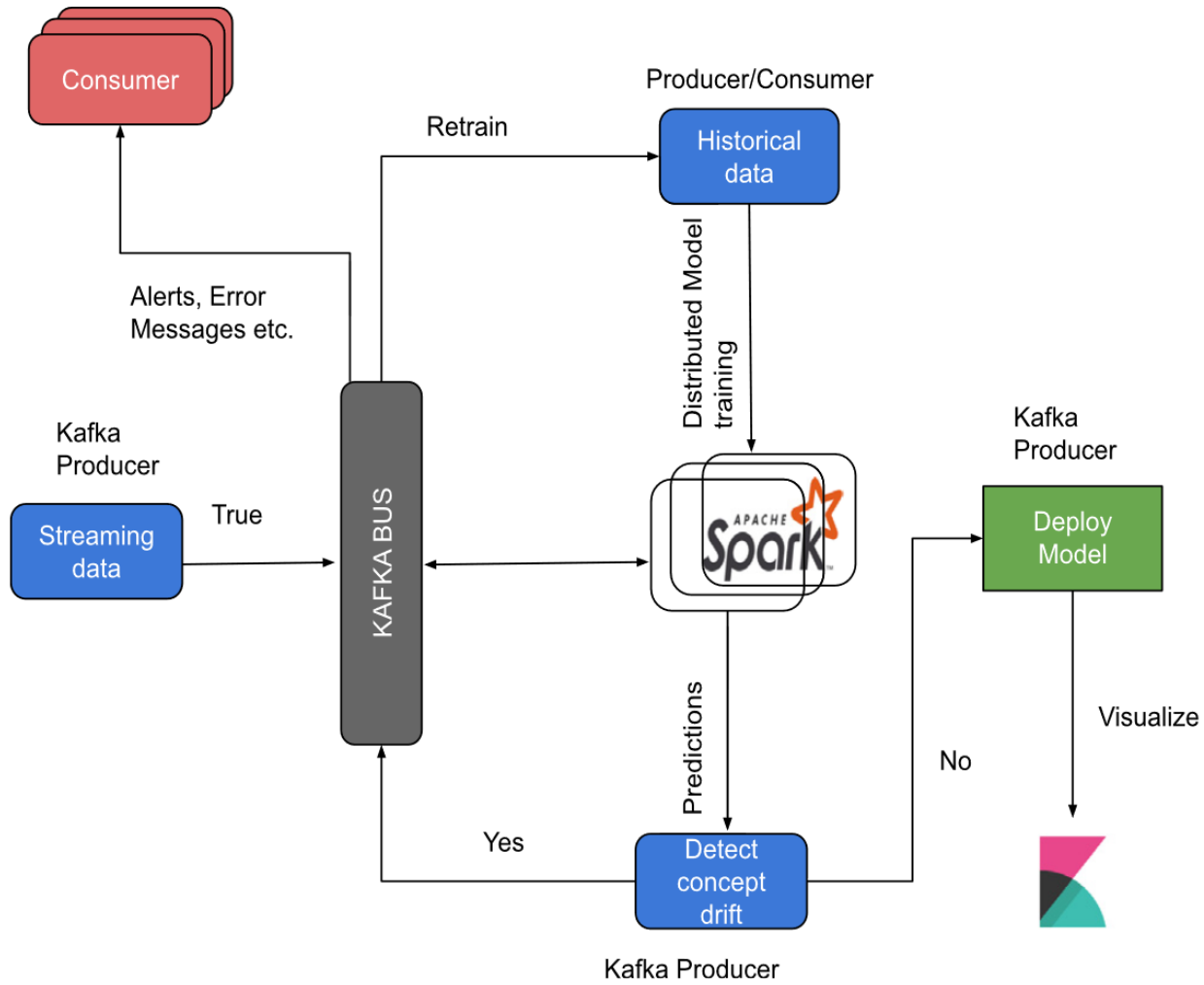


Fig. 8. General flow of introduced algorithmic process.

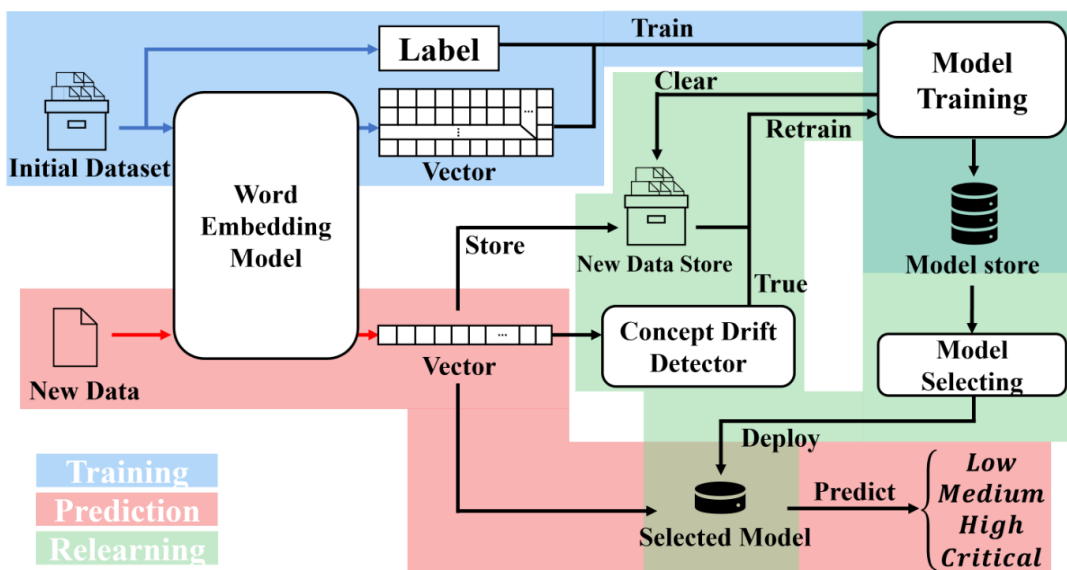


Figure 1: Proposed method: Model learning and selection by concept drift detection

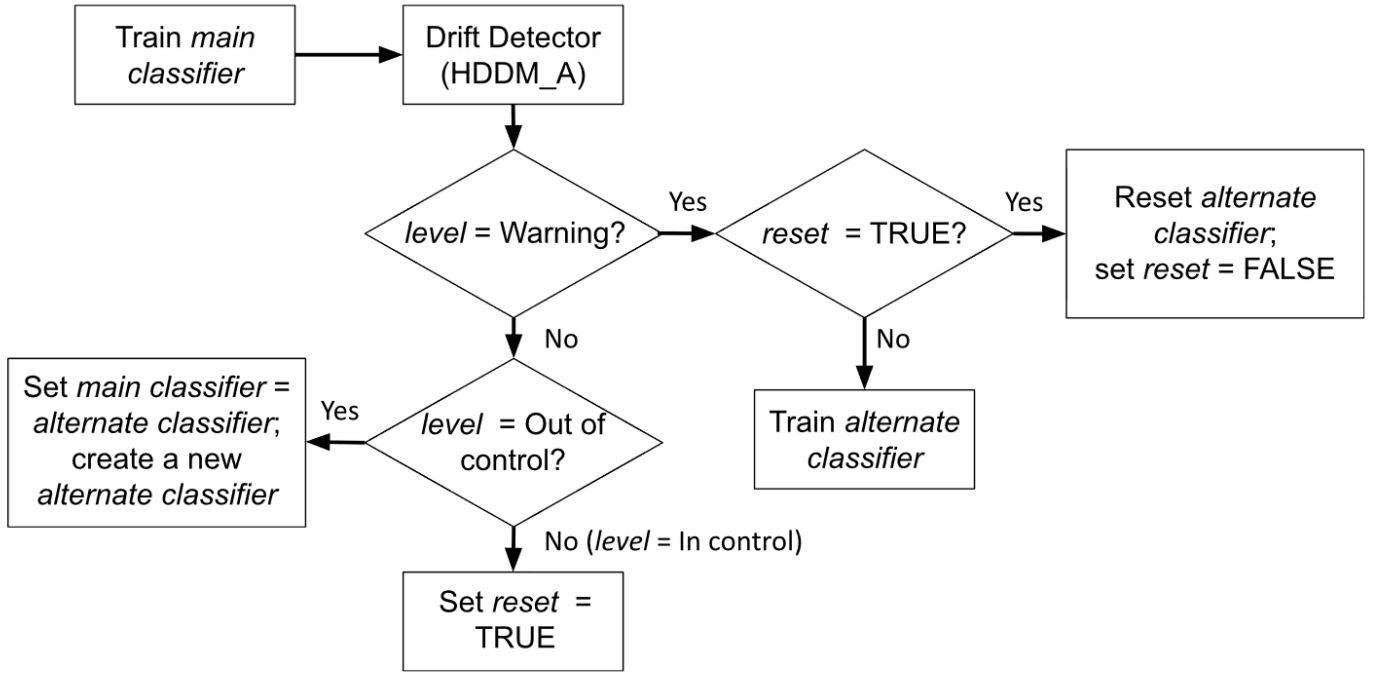


Fig. 2. Learning procedure of stacking meta-classifier; based on [26].

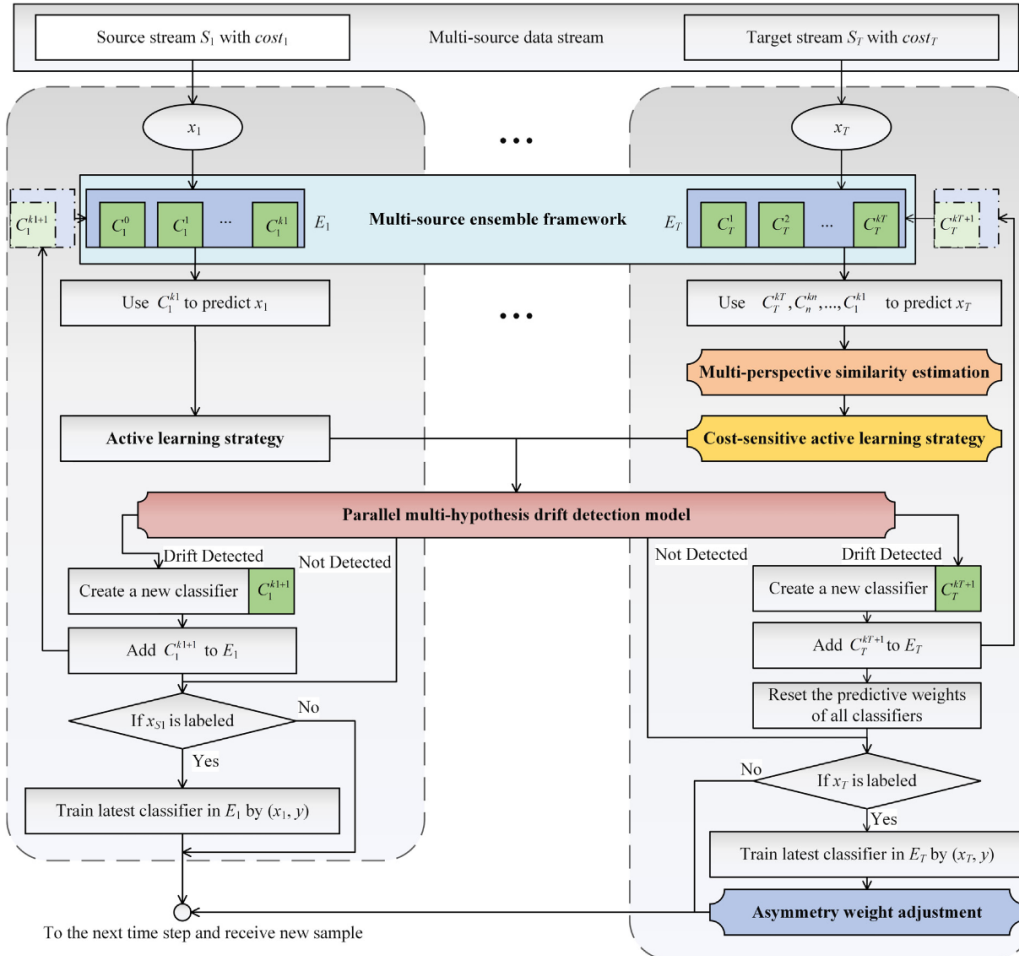


Fig. 2. The overall framework of CSAL.

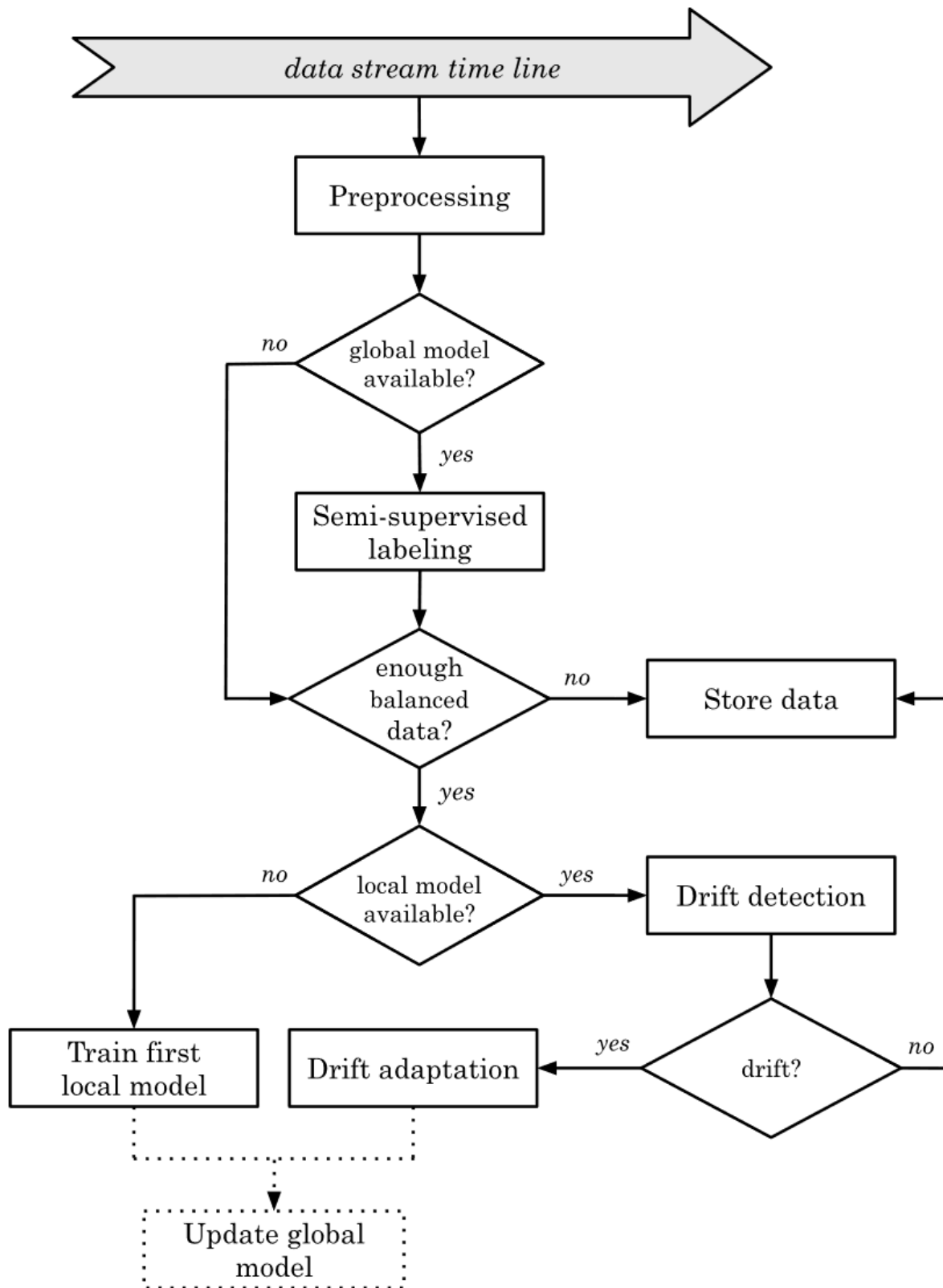
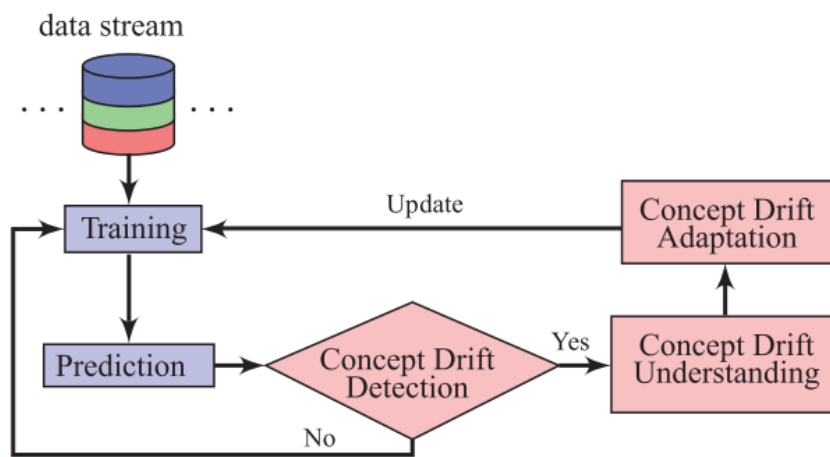


Fig. 2 Work flow on a local device

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generic: Fig. 1. Framework of learning under concept drift.

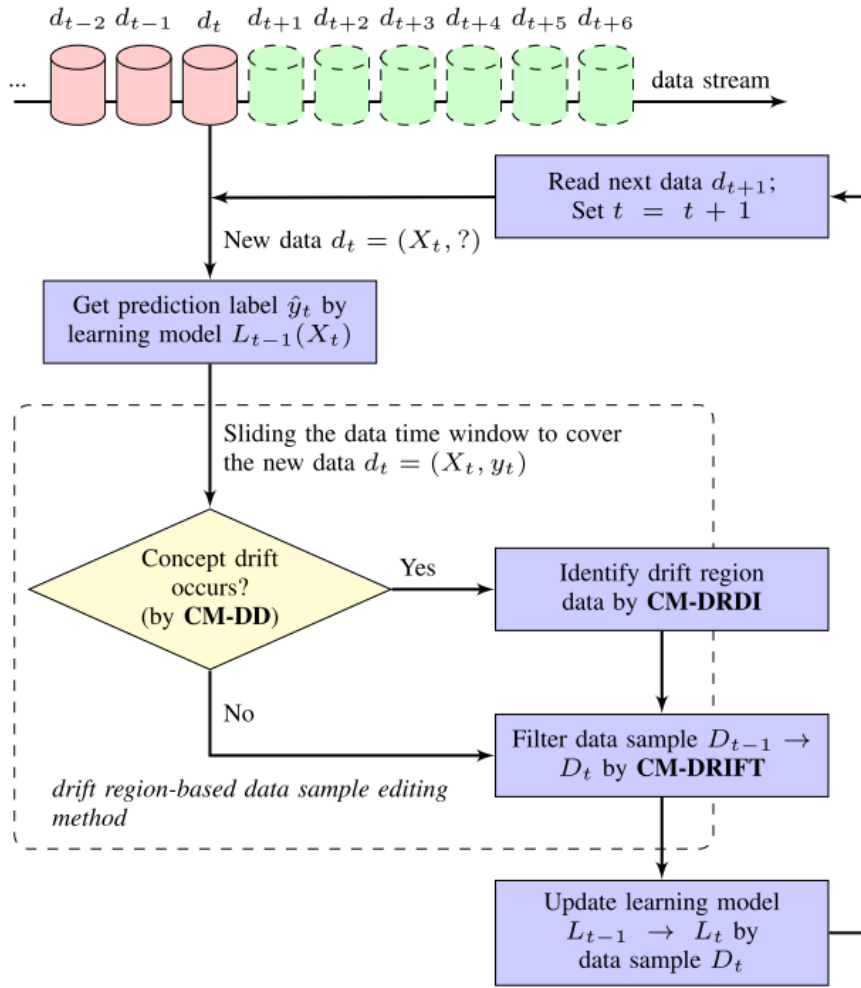


Fig. 2. Overview of data stream classification using the drift region-based approach: data sample editing method.

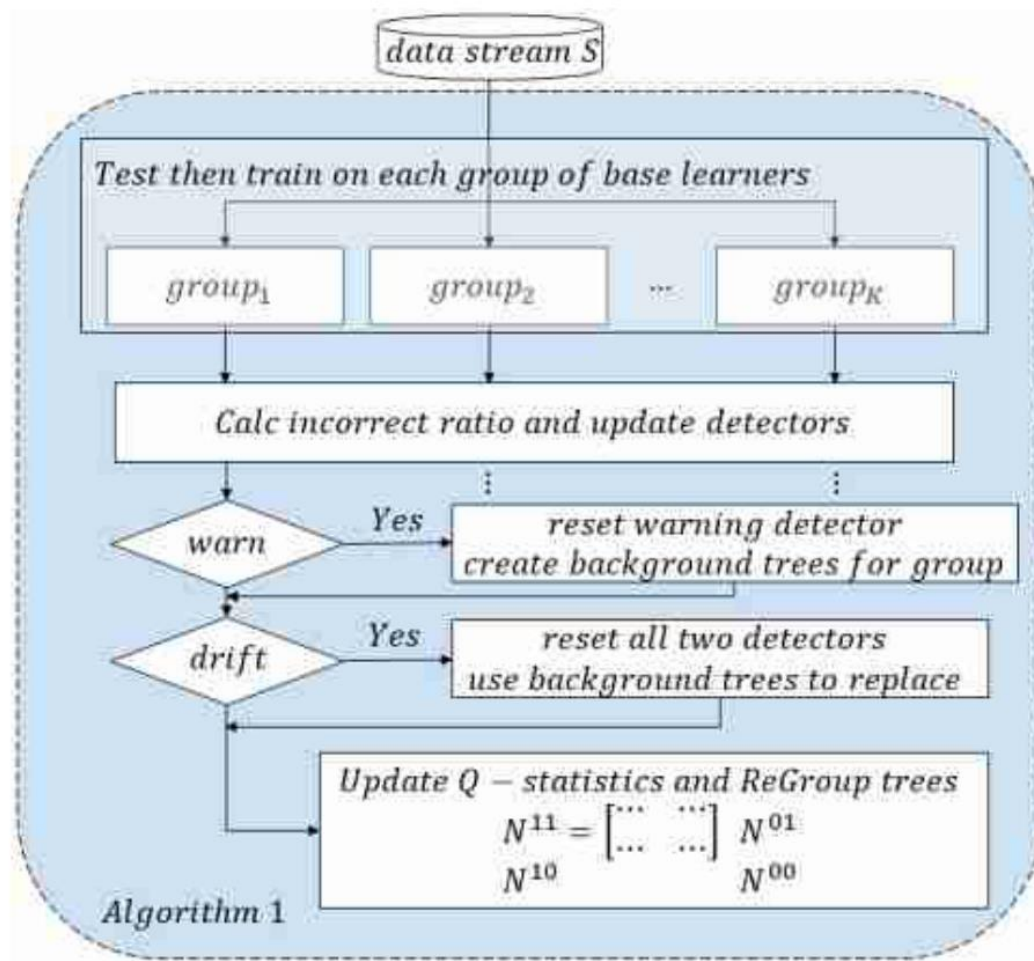


Figure 1: Flow chart of algorithm 1.

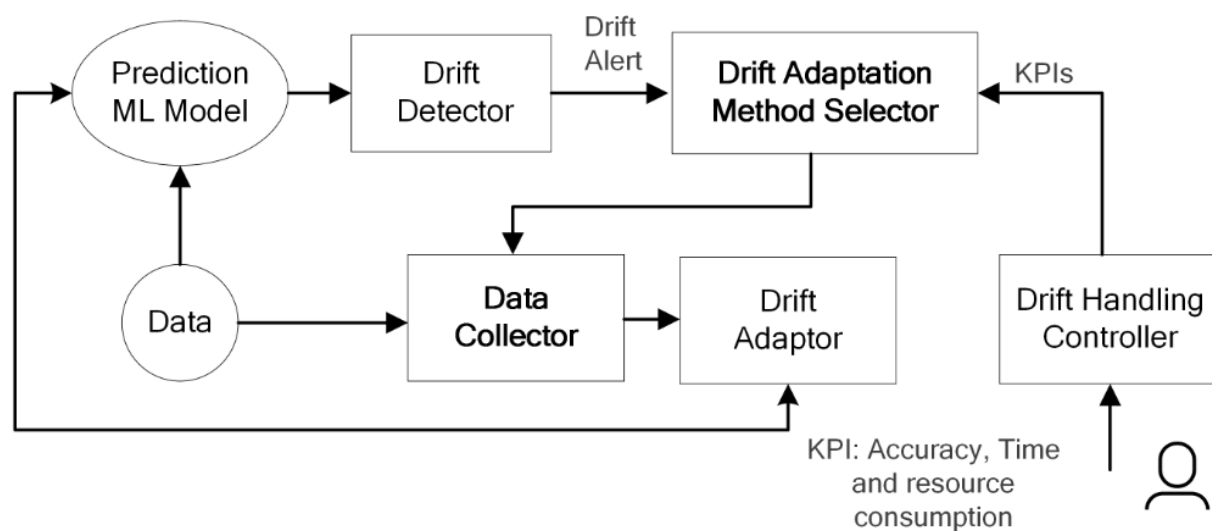


Fig. 2. Architecture of the proposed automated drift handling framework.

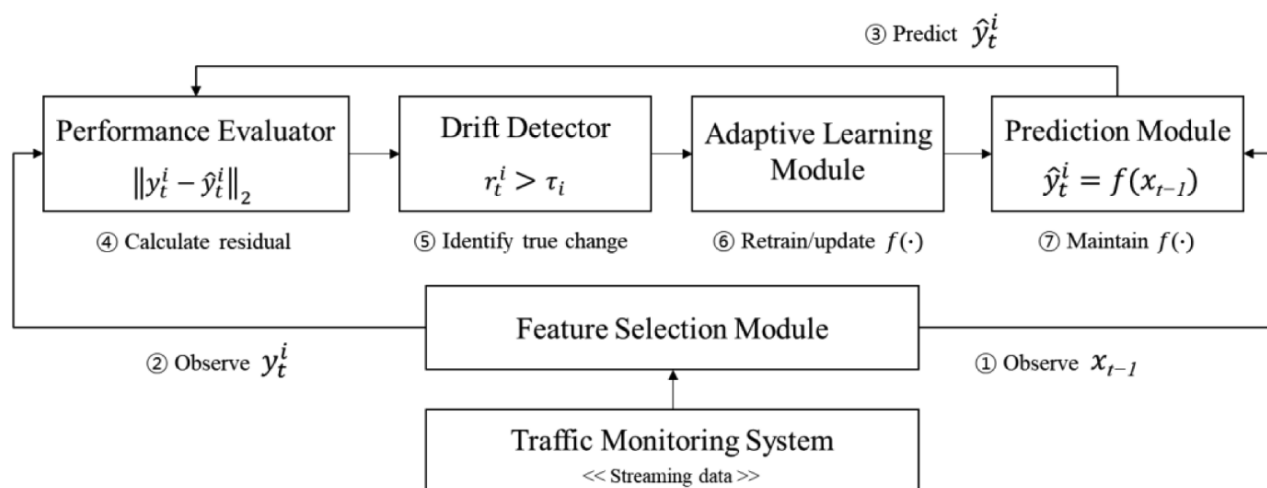


Fig. 6. Proposed concept drift modeling framework for a robust autonomous vehicle control system.

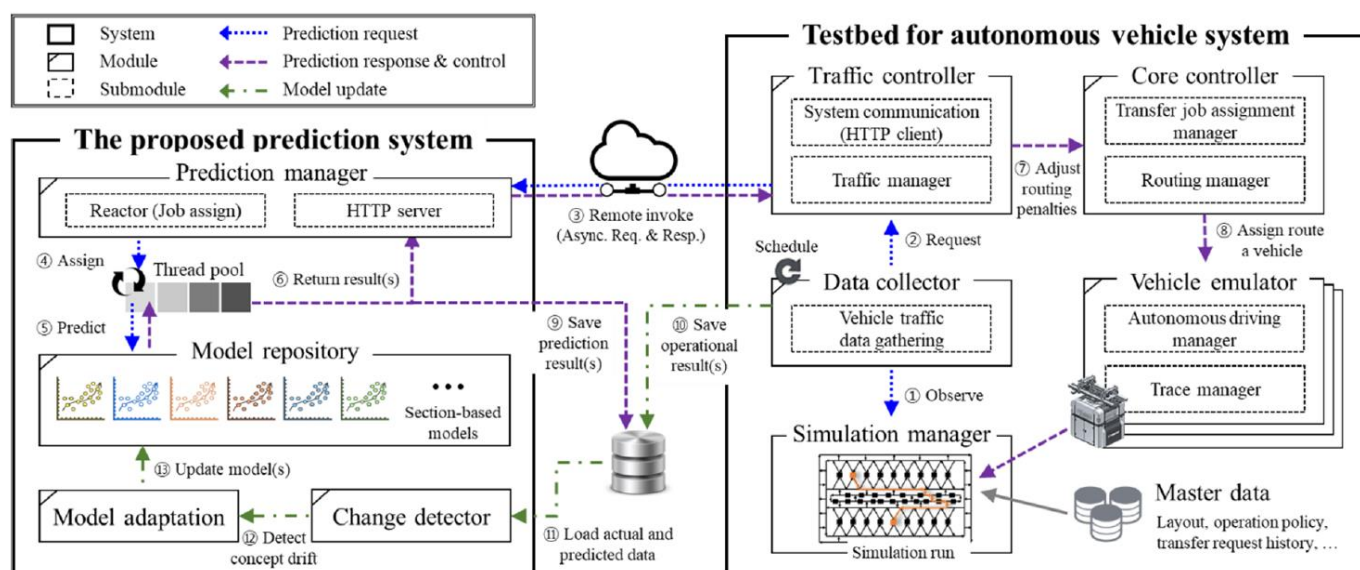


Fig. 12. Testbed platform for experimental simulations.

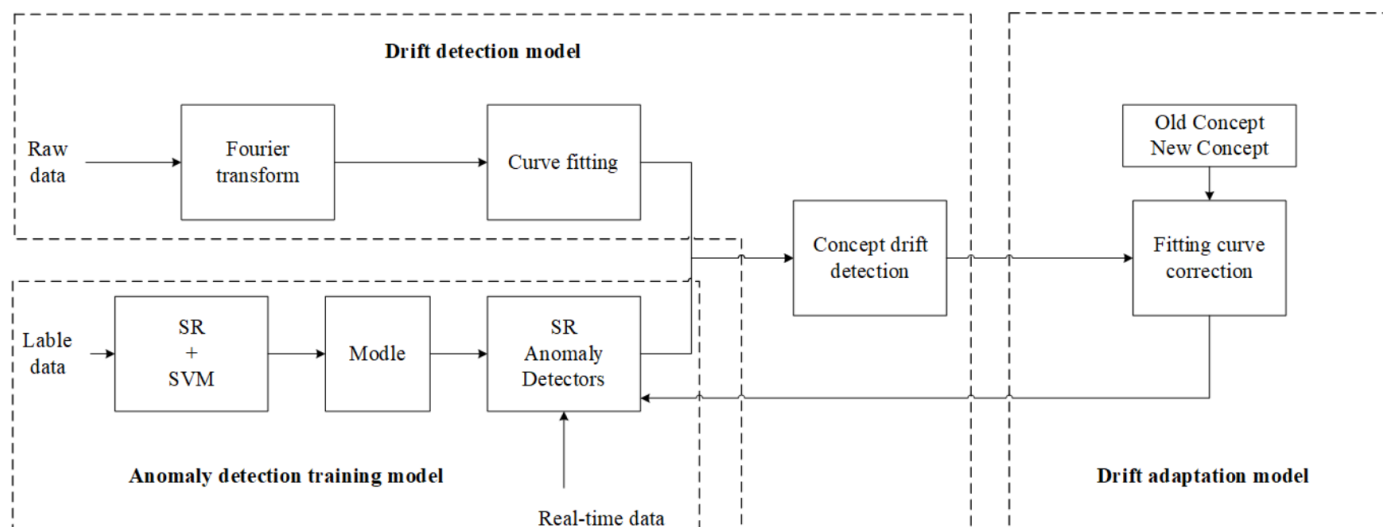


Fig. 4. CD-SR overall framework diagram