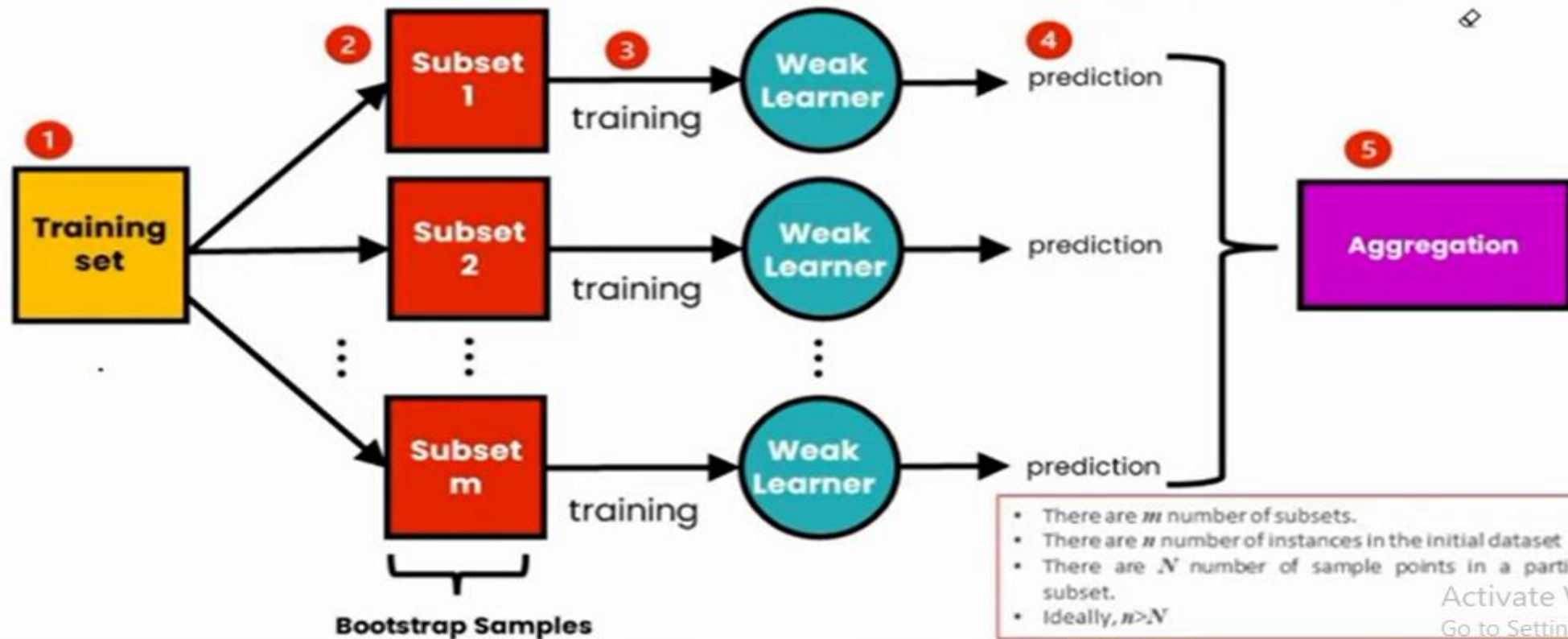


Ensemble Machine Learning Approach

1. Bagging 2. Boosting 3. Stacking

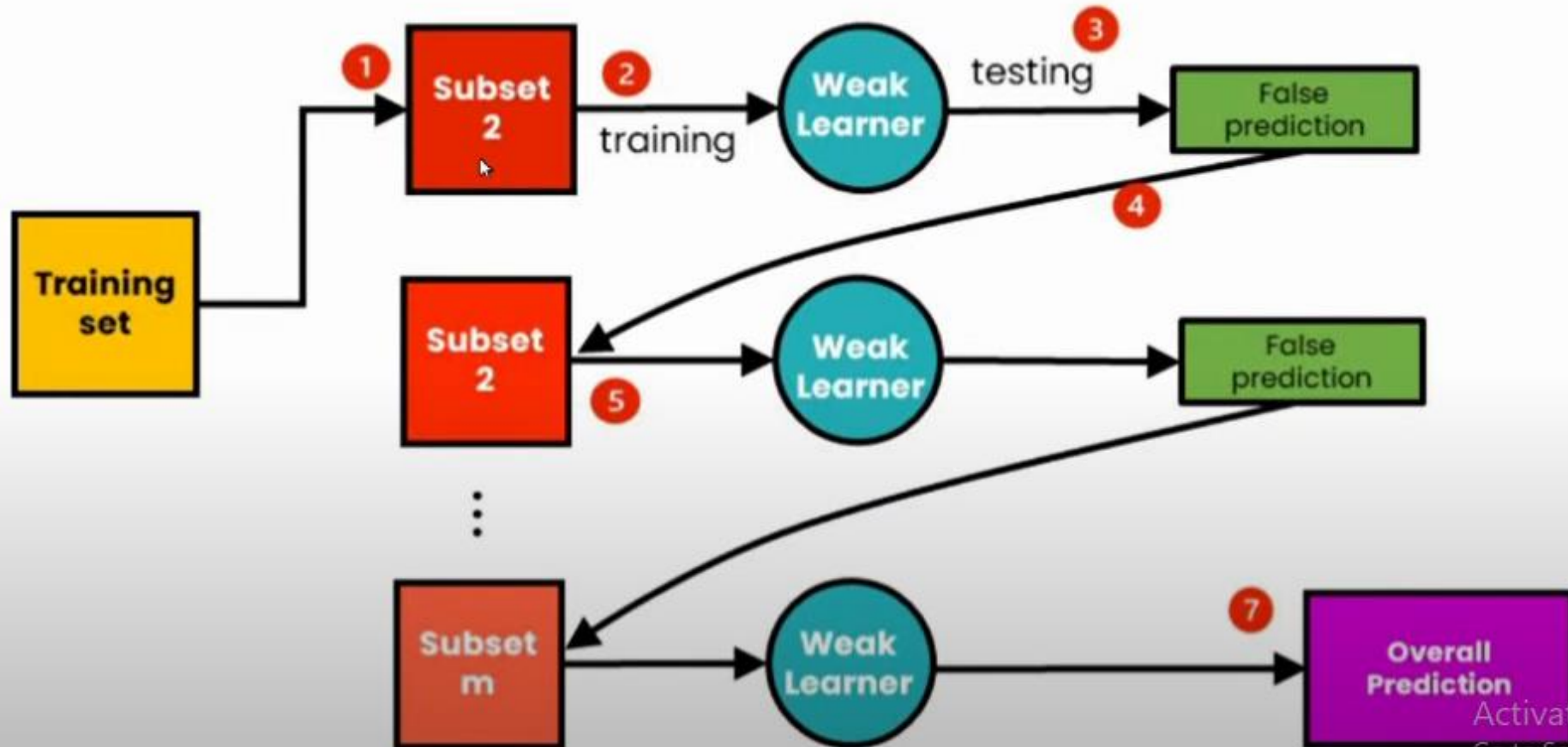
① BAGGING

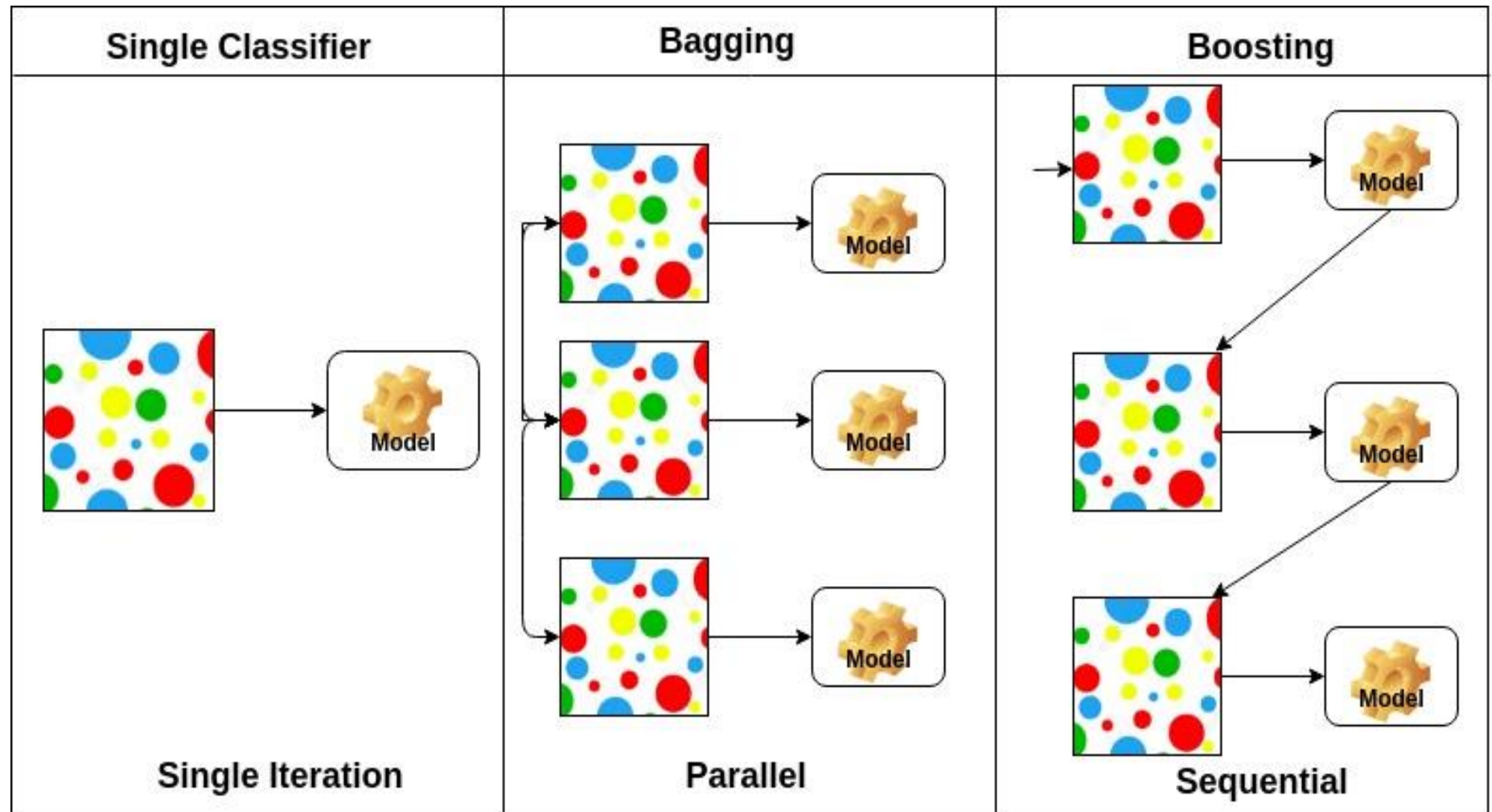
The Process of Bagging (Bootstrap Aggregation)



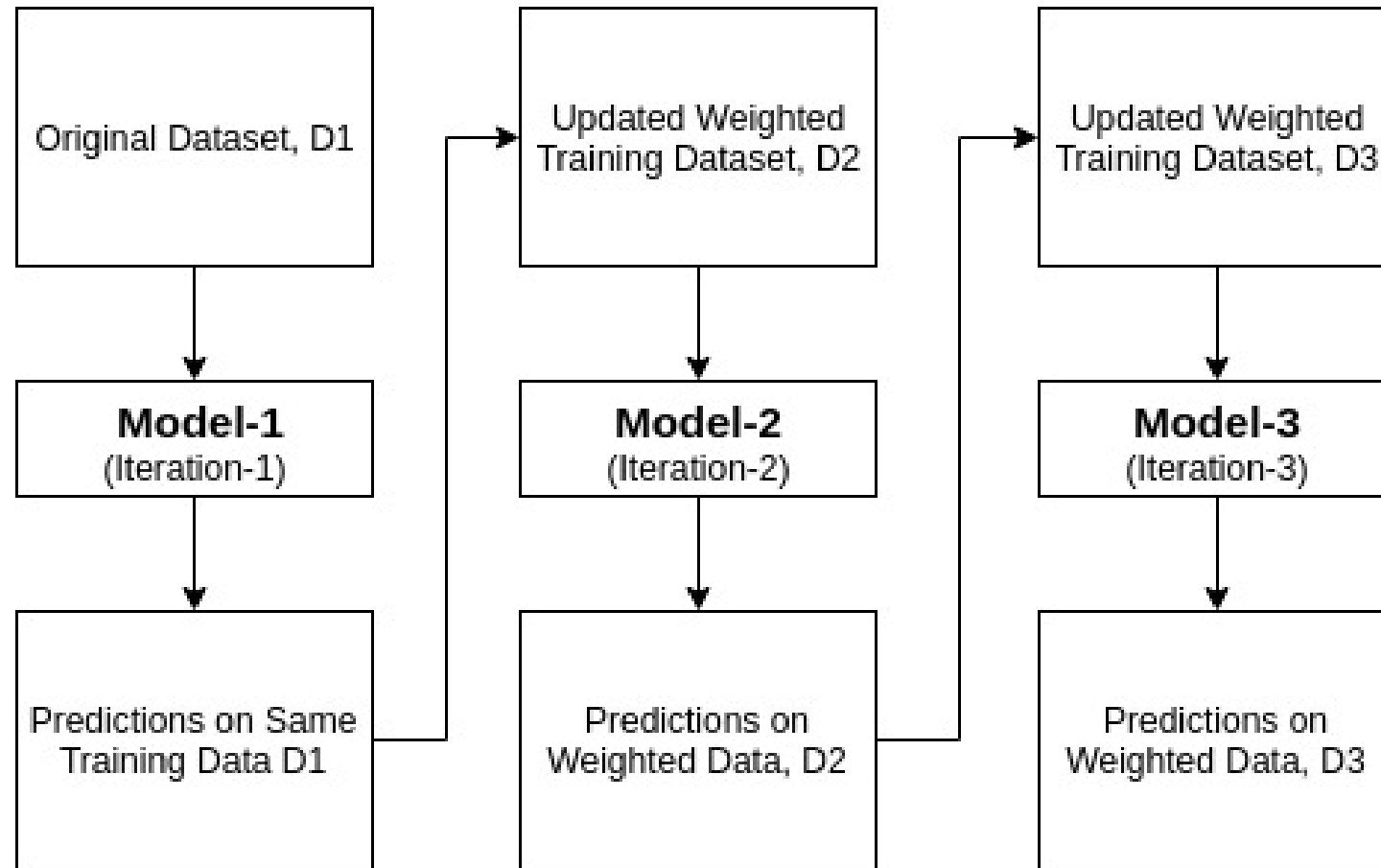
Steps of Boosting

The Process of Boosting

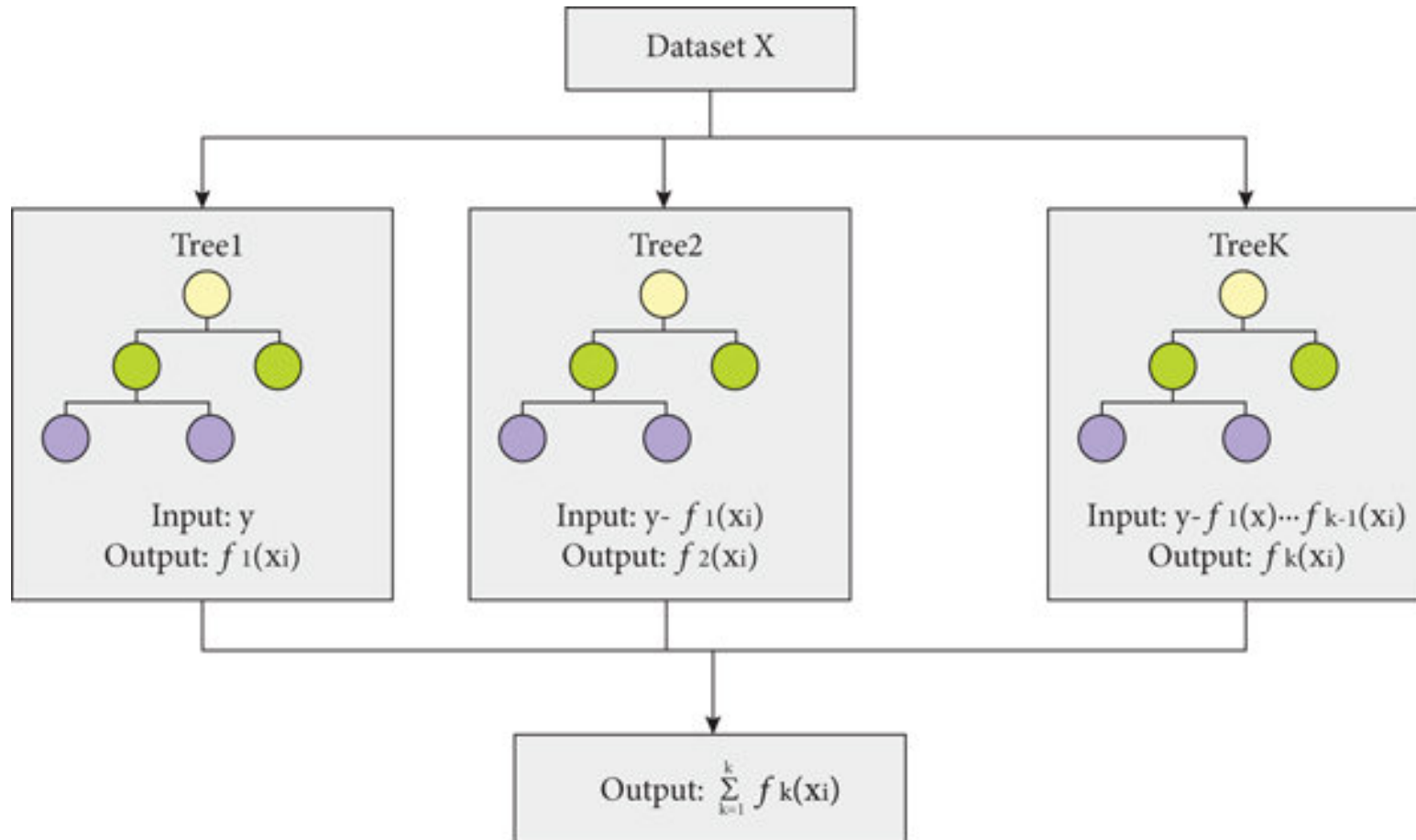




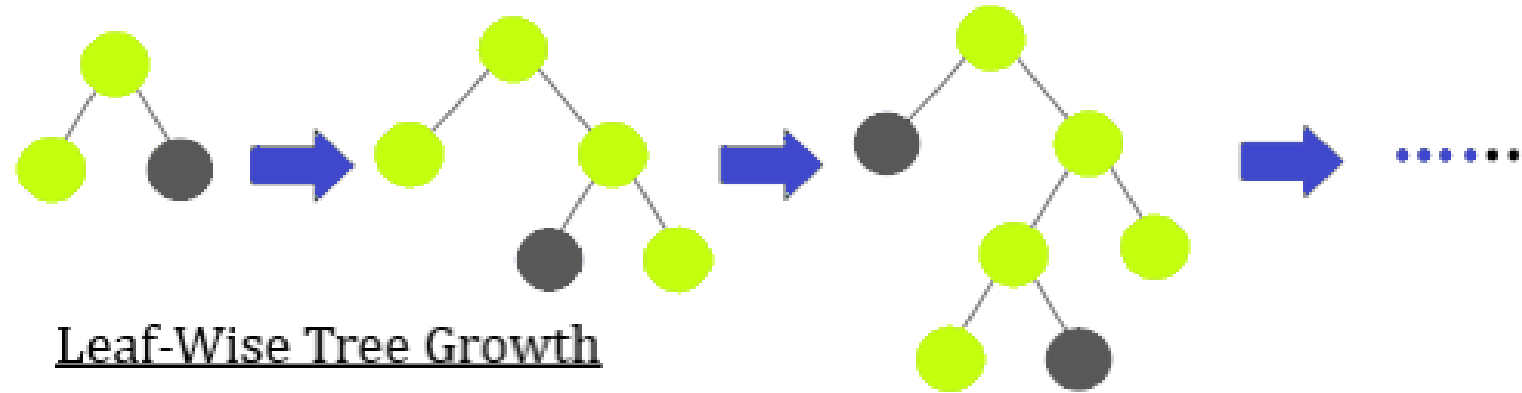
Adaboost



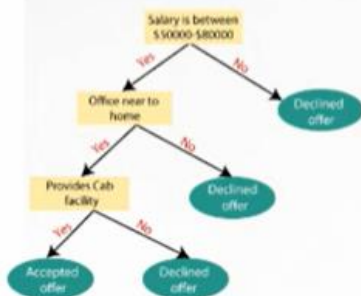
XG Boost



Light Gradient Boosting Machine (LGBM)



Flow chart of decisions based on certain conditions.



Combine predictions from multiple decision trees via majority voting (democracy)

Similar to bagging but only a subset of features are selected at random to build a collection of decision trees.

Build models sequentially by minimizing errors from previous models and boosting influence of high performing models.

Similar to boosting except uses gradient descent to minimize errors.

Optimized gradient boosting. (Parallelization, regularization, tree-pruning, etc.)



Decision Trees



Bagging



Random Forest



Boosting



Gradient Boosting



XGBoost

Activate Windows
Go to Settings to activate Windows.