Random Forst Algorithm:

Ensemble Techniques:

Combining the predictions from multiple models (base learners) to get a more accurate model.

1) **Bagging:** Random Forst. (Reduce overfitting)

Each model is trained on the subset of the data.

The new data is given to the each model and output is cheked.

For classification problems, we use majority vote classifier.

For regression problems, we calculate the average of the output.

Parallel model training.

2) **Boosting:** Reduce Underfitting

The models are sequentially trained.

Error in one model is fixed by other model.

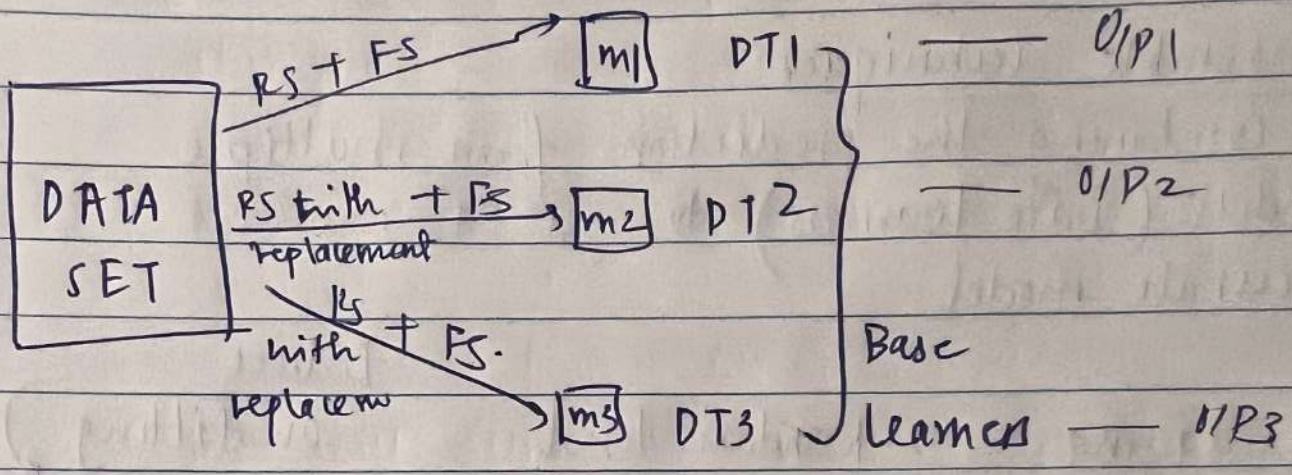
Weak learners are combined.

AdaBoost

Gradient

XgBoost

RANDOM FOREST.



For Regression, Arerage of the output.
For Classification, majority voting classifier.

Why to use Random forest?

It reduces overfitting that may occur in decision trees.
→ Averaging of outputs.
Higher Accuracy. It reduce variance.