

wisdom of crowd

whenever bunch of people answer the question & we take the mean of all answer then it turns out to be the true answer

core idea

training:-

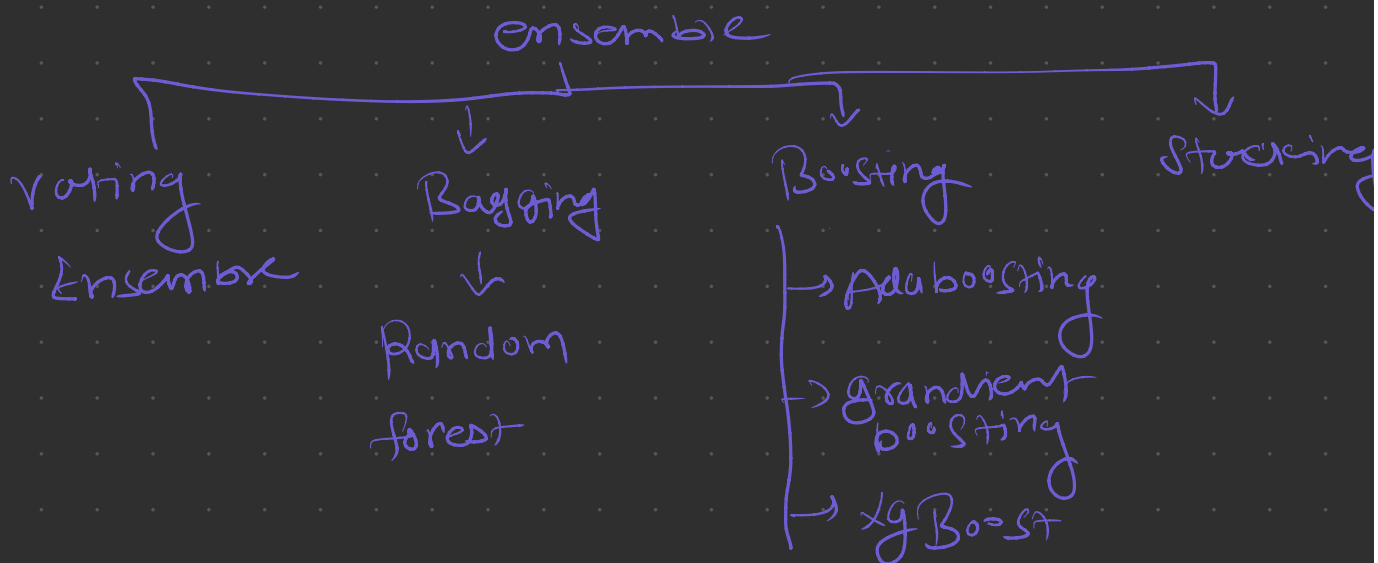
Prediction:-

we have multiple different models

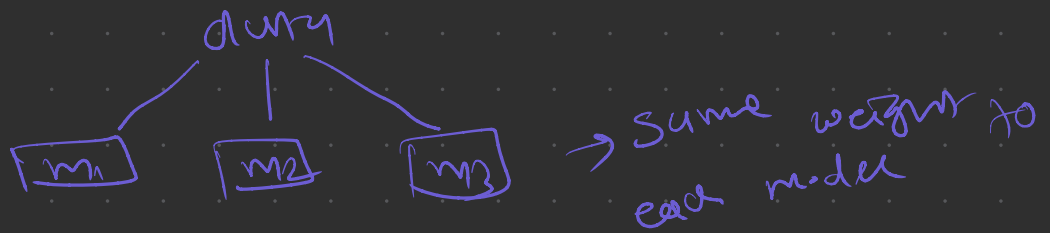
$\{m_1, m_2, m_3, m_4, \dots, m_n\}$

or
model is same but the data we train on is different.

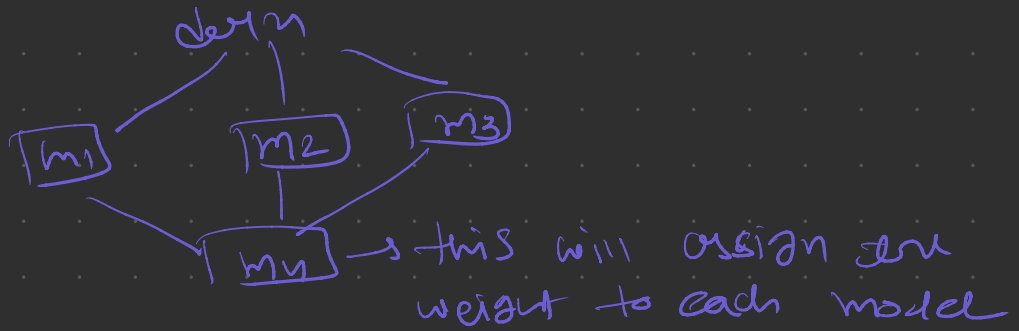
type of Ensemble learning:-



① Voting :- Base models are different
same data for different models.



② Stacking :- Base models are different
Same data for different models
then we take output of each model
and give as input as different model



③ Bagging :- Same model but different
we have same algo, but we
train three model of same algo
with different sample of pop. data

Bagging of decision tree is called Random forest

④ Boosting :- Same algo or model
next model learn from the mistake
of Previous algorithm

Benefits:

① Improve Performance

② reduce the Bias and variance

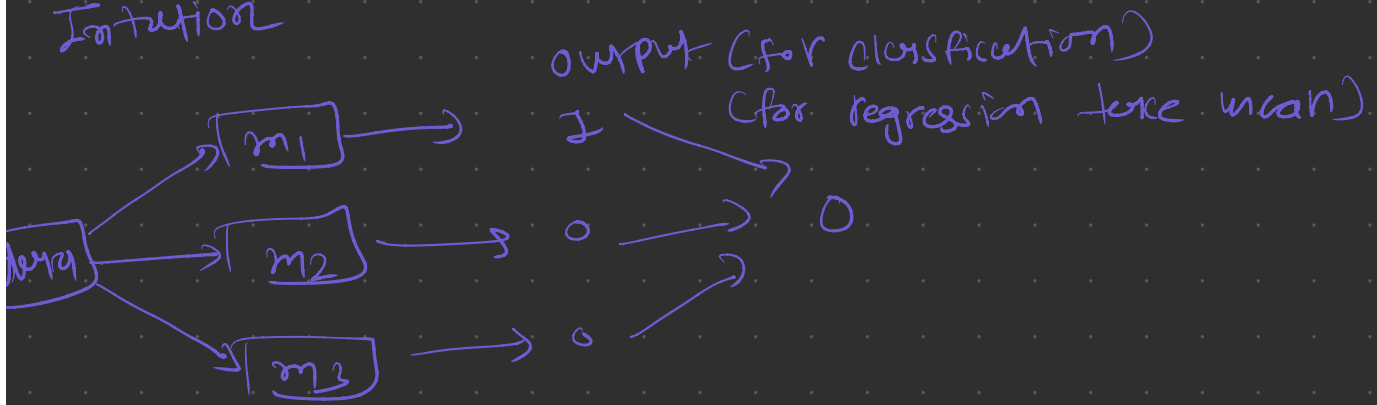
③ Robustness

when to use?

ALWAYS

① voting ensemble

Intuition



- ① more difference b/w model, better overall model work
- ② minimal accuracy of each model should be 0.51