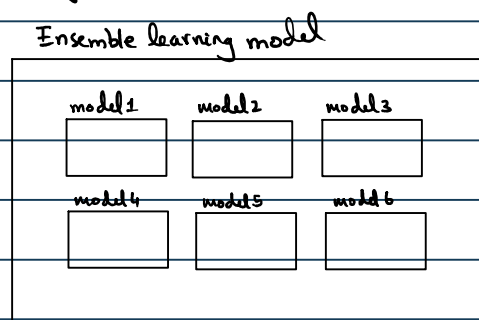


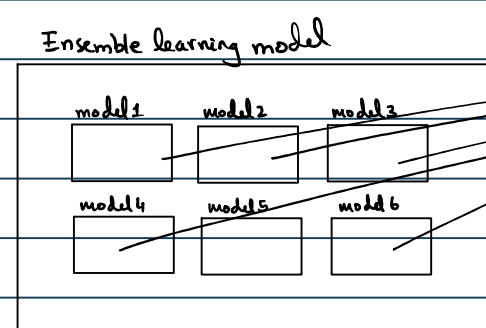
What is Ensemble Learning?

Sunday 5 May 2024 10:48 PM

→ Collection of multiple machine models.

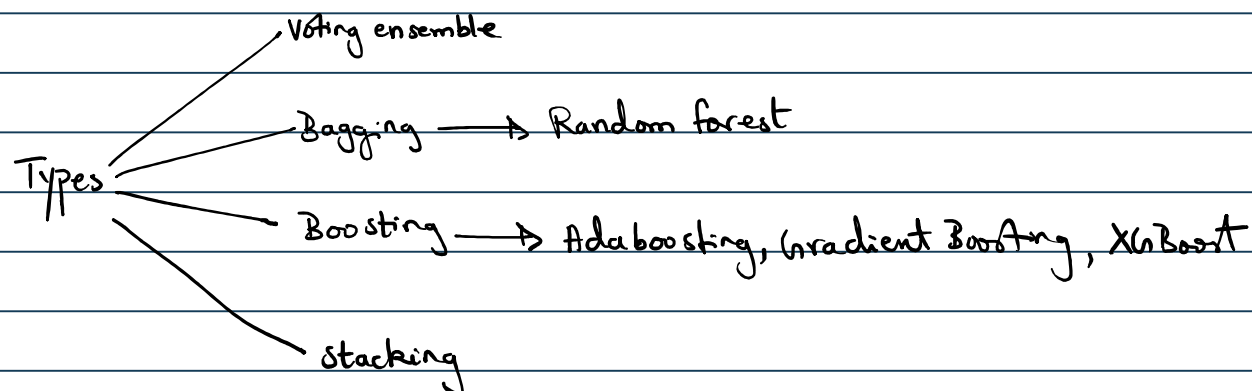
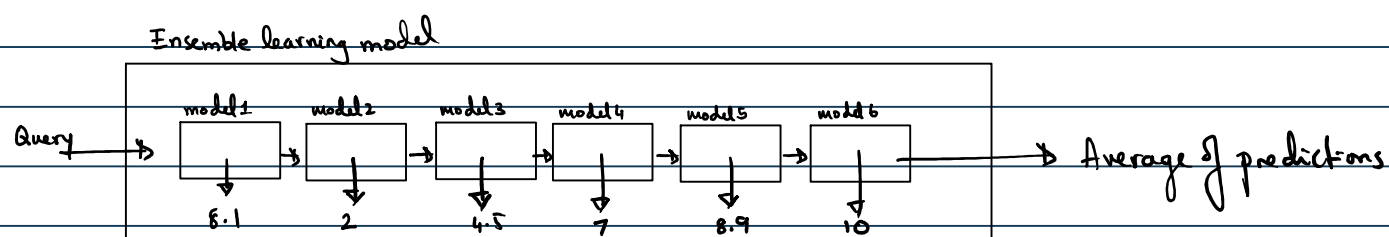
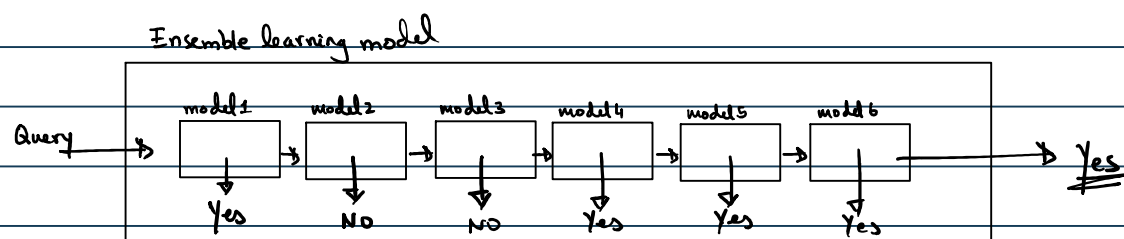


→ Wisdom of the crowd (many are smarter than the few) (key is to have a diverse crowd)



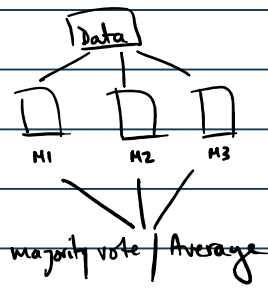
Different Base models / Variety

- different Algos
- Same Algos trained on different datasets

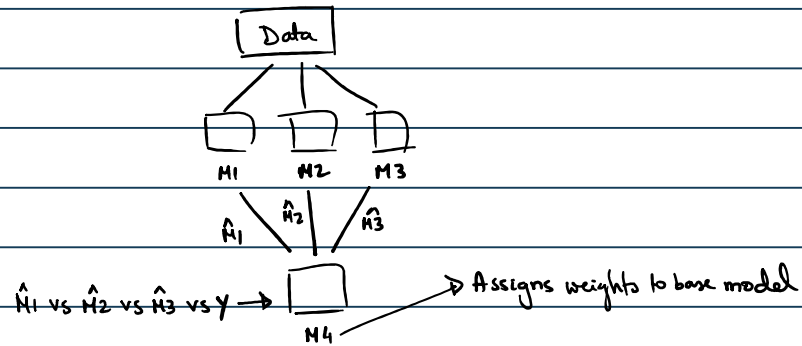


Voting ensemble

→ Base models are different



Stacking



Bagging

→ Sample with replacement

→ Bootstrapped Aggregation

→ Same base models trained on different subsets of data.

→ Random forest is a special case of Bagging where all the base models are decision trees.

Boosting

→ Each subsequent model takes the errors of previous model as input and improves upon them.

→ Improvement in performance

→ Ensemble learning aims to achieve Low Bias + Low Variance

→ Robustness