Ensemble Methods

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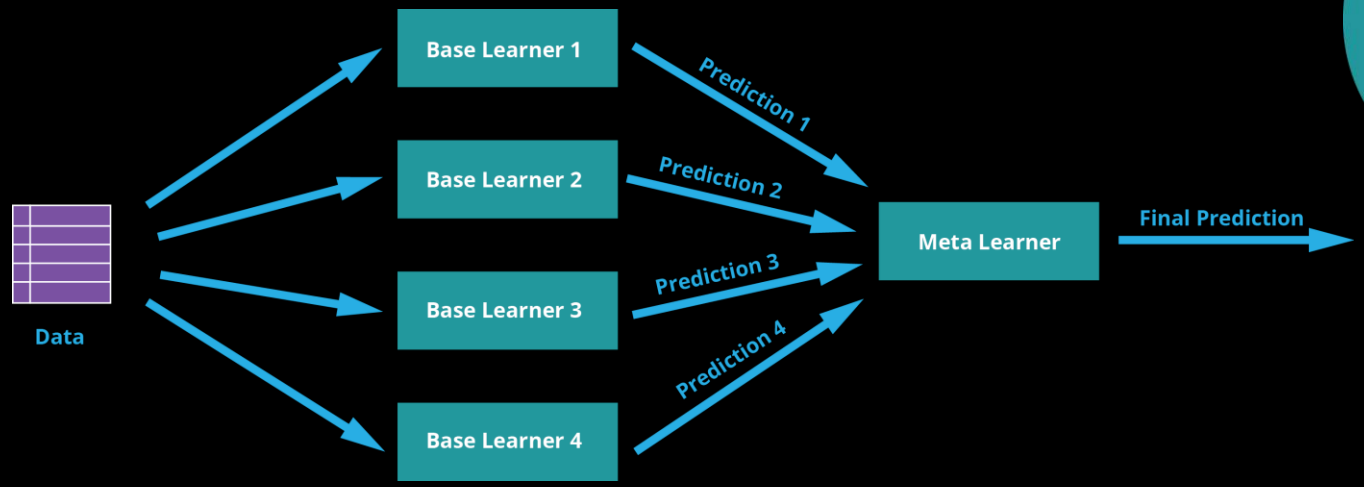
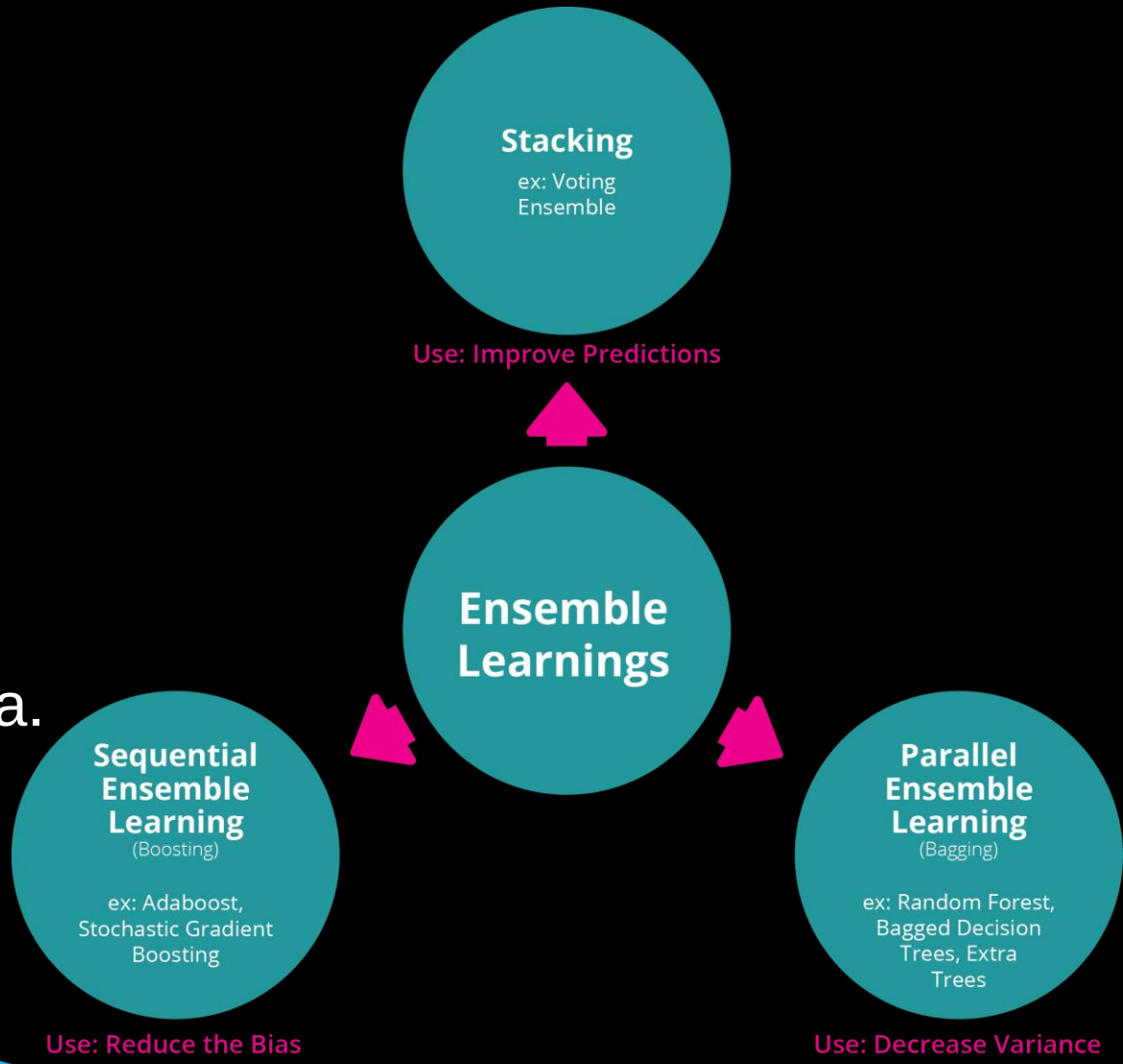
Ensemble Methods

- Bootstraps Base or ‘Weak’ Learners.
- Best to use homogenous base learners.
- Can work with very complex and large data.





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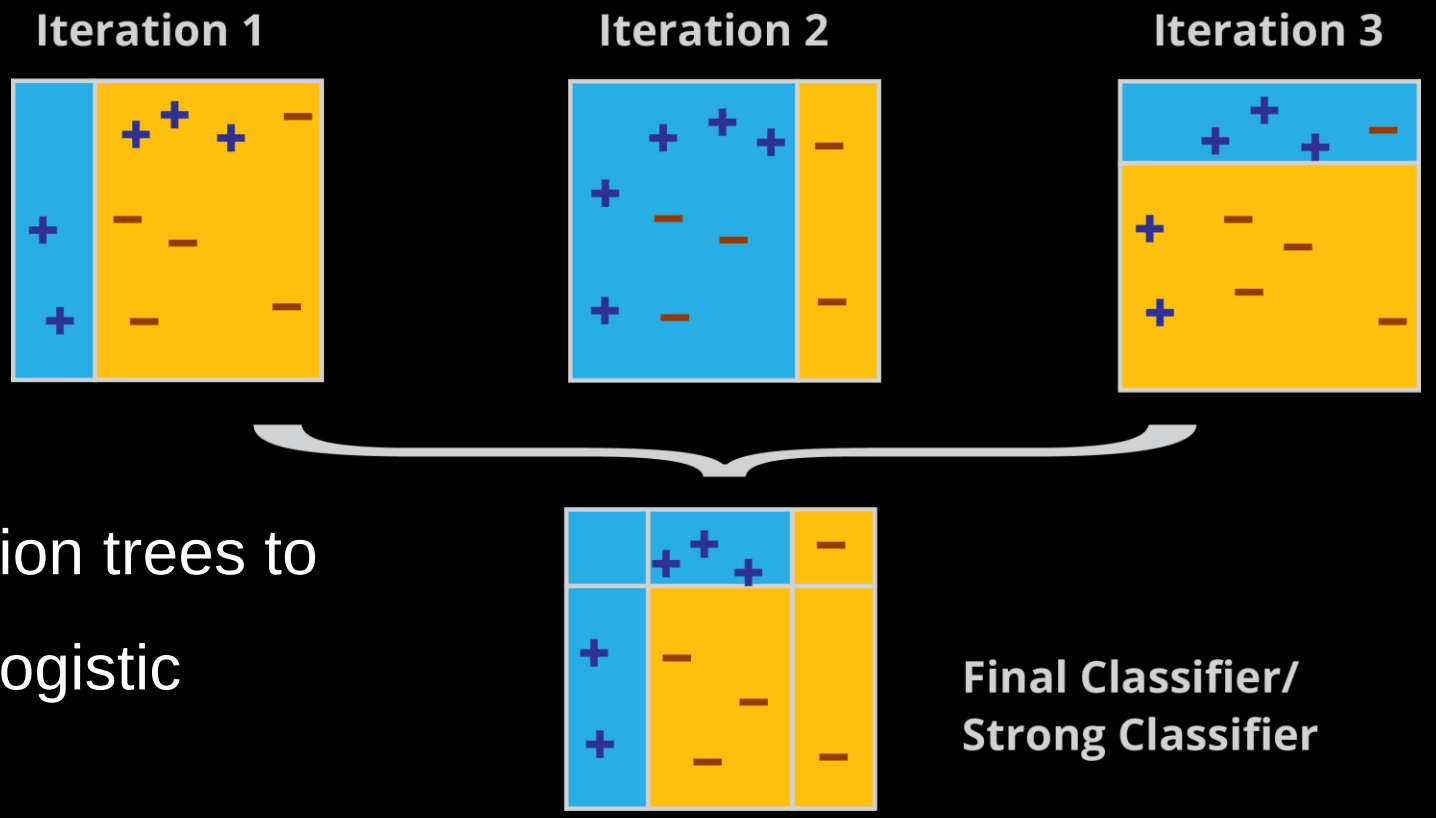
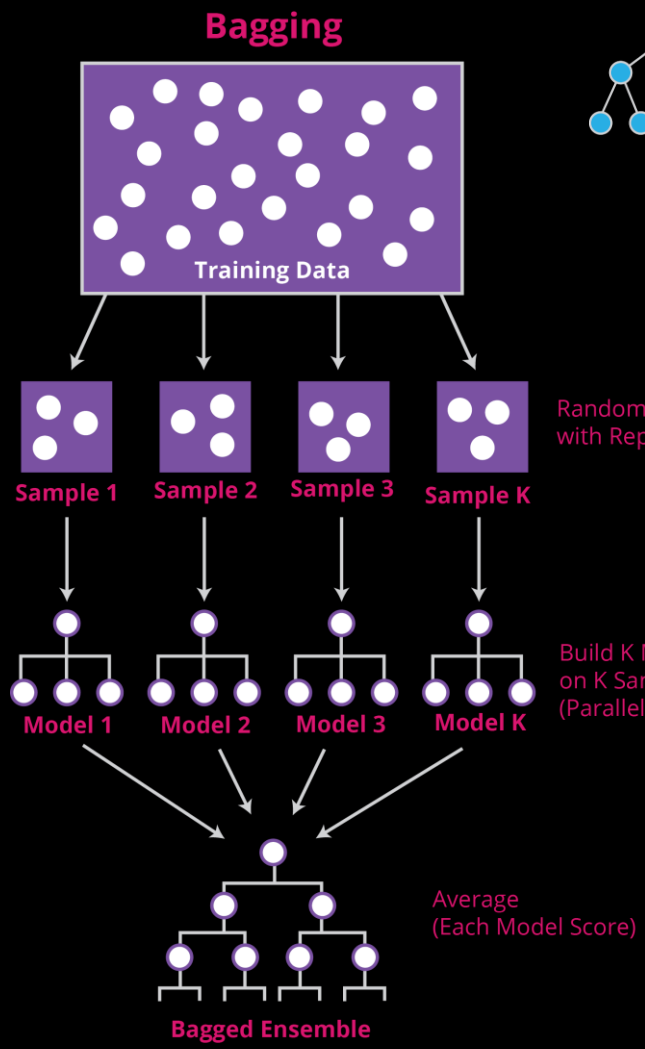
AdaBoost

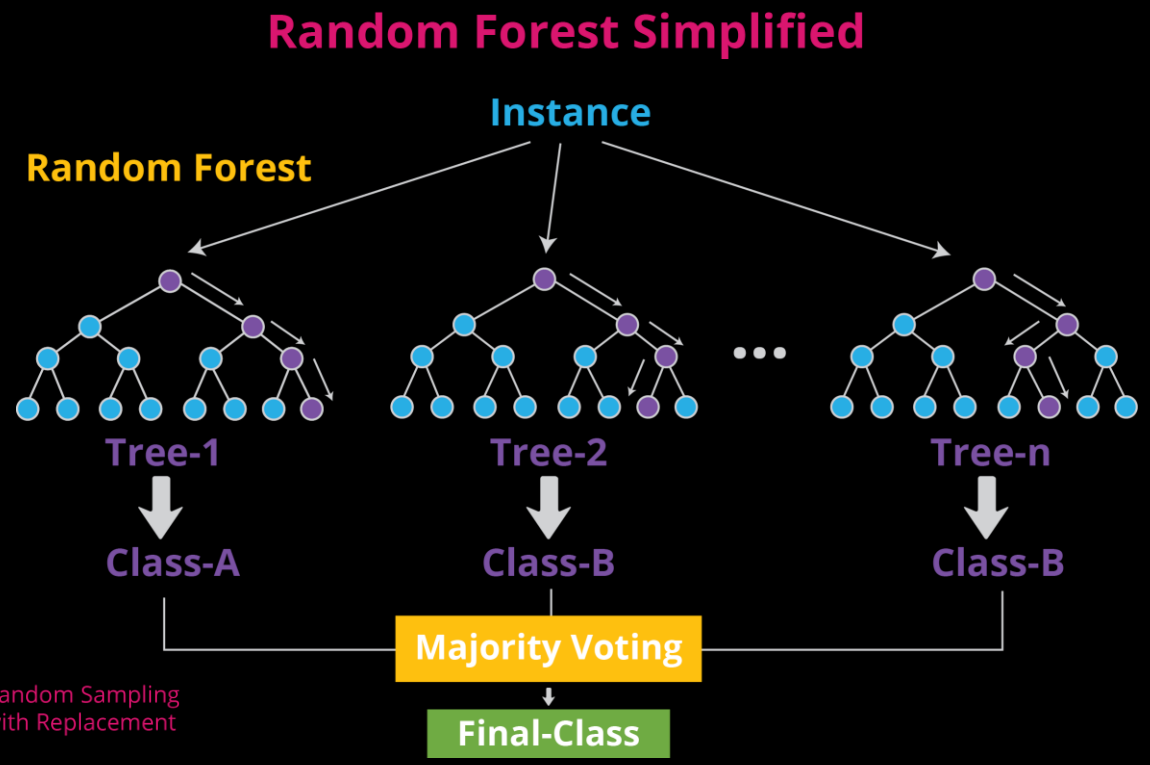


- Typically uses many small decision trees to learn the data but can also use logistic regressions.
- It uses a weighted sum of the outputs of each learner.

Random Forest

- Is only made of many small decision trees.
- Uses Bagging
- It uses the outputs of each learner to ‘vote’ on the correct output.





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Stacking Methods

- Involves adding two ensemble networks together.
- The networks are usually made up of random forest models.
- Works with very complex data.