Your grade: 90%

Your latest: **90%** • Your highest: **90%**
To pass you need at least 70%. We keep your highest score.

1. The term *Bagging* stands for bootstrap aggregating. **1 / 1 point**

True

False

Correct
Correct! You can find more information in the lesson: *Ensemble Based Methods and Bagging*.

2. This is the best way to choose the number of trees to build on a Bagging ensemble. **1 / 1 point**

Choose a number of trees past the point of diminishing returns

Choose a large number of trees, typically above 100

Prioratize training error metrics over out of bag sample

Tune number of trees as a hyperparameter that needs to be optimized

Correct
Correct! You can find more information in the lesson: *Ensemble Based Methods and Bagging*.

3. Which type of Ensemble modeling approach is NOT a special case of model averaging? **1 / 1 point**

The Pasting method of Bootstrap aggregation

The Bagging method of Bootstrap aggregation

Boosting methods

Random Forest methods

Correct
Correct! You can find more information in the lesson *Overview of Boosting.*

4. What is an ensemble model that needs you to look at out of bag error? **1 / 1 point**

Out of Bag Regression

Stacking

Logistic Regression.

Random Forest

Correct
Correct! You can find more information in the lesson *Random Forest.*

5. What is the main condition to use stacking as ensemble method? **1 / 1 point**

Models need to output residual values for each class

Models need to be parametric

Models need to output predicted probabilities

Models need to be nonparametric

Correct
Correct! You can find more information in the lesson *Stacking.*

6. This tree ensemble method only uses a subset of the features for each tree: 1 / 1 point

Random Forest

Bagging

Stacking

Adaboost

Correct
Correct! This tree ensemble only uses a subset of the features for each tree. For more information, please review the Random Forest lesson.

7. Order these tree ensembles in order of most randomness to least randomness: 1 / 1 point

Random Trees, Random Forest, Bagging

Bagging, Random Forest, Random Trees

Random Forest, Bagging, Random Trees

Random Forest, Random Trees, Bagging

Correct
Correct! Random Trees add one more degree of randomness than Random Forests and two more than Bagging. You can find more information in the Random Forest lesson.

8. This is an ensemble model that does not use bootstrapped samples to fit the base trees, takes residuals into account, and fits the base trees iteratively: 1 / 1 point

Bagging

Random Trees

Random Forest

Boosting

Correct
Correct! These are all characteristics of boosting algorithms. You can find more information in the *Boosting* lesson.

9. When comparing the two ensemble methods Bagging and Boosting, what is one characteristic of Boosting? **1 / 1 point**

Fits entire data set

Bootstraped samples

Only data points are considered

No weighting used

Correct
Correct. With Boosting you can use the entire data set to train each of the classifiers

10. What is the most frequently discussed loss function in boosting algorithms?

Gradient Loss Function

Gradient Boosting Loss Function

0-1 Loss Function

AdaBoost Loss Function

Incorrect
Incorrect. Please review the *Adaboost and Gradient Boosting Overview*video.