

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

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

☐ Choose a number of trees past the point of diminishing returns

☐ Choose a large number of trees, typically above 100

☐ Prioritize training error metrics over out of bag sample

✓ **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

☒ Boosting methods

☐ The Bagging method of Bootstrap aggregation

☐ Random Forest methods

☐ The Pasting method of Bootstrap aggregation

✓ **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

☐ Logistic Regression.

☐ Stacking

☒ 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 be parametric

☒ Models need to output predicted probabilities

☐ Models need to be nonparametric

☐ Models need to output residual values for each class

✓ **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

- ☐ Stacking
- ☐ Adaboost
- ☒ Random Forest
- ☐ Bagging



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, Random Trees, Bagging
- ☐ Random Forest, Bagging, Random Trees



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

- ☒ Boosting
- ☐ Bagging
- ☐ Random Forest
- ☐ Random Trees



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

- ☐ Only data points are considered
- ☒ Fits entire data set
- ☐ Bootstrapped samples
- ☐ 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?

1 / 1 point

- ☐ Gradient Loss Function
- ☒ 0-1 Loss Function
- ☐ AdaBoost Loss Function
- ☐ Gradient Boosting Loss Function



Correct

Correct. The 0-1 Loss function is the most frequently discussed loss function.