Your grade: 100%

Your latest: **100%** • Your highest: **100%** • To pass you need at least 70%. We keep your highest score.

Next item →

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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
   ⦿ Tune number of trees as a hyperparameter that needs to be optimized
   ○ Choose a large number of trees, typically above 100
   ○ Prioratize 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**

   ○ The Bagging method of Bootstrap aggregation
   ○ Random Forest methods
   ⦿ Boosting 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
   ⦿ Random Forest
   ○ Logistic Regression.
   ○ Stacking

   ✓ **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 predicted probabilities
   ○ Models need to be parametric
   ○ Models need to output residual values for each class
   ○ 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**

- ○ Stacking
- ● Random Forest
- ○ Bagging
- ○ 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 Forest, Bagging, Random Trees
- ○ Bagging, Random Forest, Random Trees
- ○ Random Forest, Random Trees, Bagging
- ● Random Trees, Random Forest, 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**

- ● Boosting
- ○ Random Trees
- ○ Random Forest
- ○ Bagging

> ⊘ **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
- ○ No weighting used
- ○ Only data points are considered
- ○ Bootstraped samples

> ⊘ **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 Boosting Loss Function
- ○ AdaBoost Loss Function
- ● 0-1 Loss Function
- ○ Gradient Loss Function

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