Congratulations! You passed!
TO PASS 80% or higher

Keep Learning

GRADE
100%

Classification

LATEST SUBMISSION GRADE
100%

1. Which of the following is a TRUE statement about classification? **1 / 1 point**

- ○ Classification is an unsupervised task.
- ◉ Classification is a supervised task.
- ○ In a classification problem, the target variable has only two possible outcomes.

Correct
That's correct!

2. In which phase are model parameters adjusted? **1 / 1 point**

- ○ Data preparation phase
- ◉ Training phase
- ○ Testing phase
- ○ Model parameters are constant throughout the modeling process.

Correct
That's correct!

3. Which classification algorithm uses a probabilistic approach? **1 / 1 point**

- ○ k-nearest-neighbors
- ○ none of the above
- ◉ naive bayes
- ○ decision tree

Correct
That's correct!

4. What does the 'k' stand for in k-nearest-neighbors? **1 / 1 point**

- ○ the distance between neighbors: All neighboring samples that are 'k' distance apart from the sample are considered in classifying that sample.
- ○ the number of samples in the dataset
- ◉ the number of nearest neighbors to consider in classifying a sample
- ○ the number of training datasets

Correct
That's correct!

5. During construction of a decision tree, there are several criteria that can be used to determine when a node should no longer be split into subsets. Which one of the following is NOT applicable? **1 / 1 point**

- ○ The tree depth reaches a maximum threshold.
- ○ All (or X% of) samples have the same class label.
- ◉ The value of the Gini index reaches a maximum threshold.
- ○ The number of samples in the node reaches a minimum threshold.

Correct
That's correct!

6. Which statement is true of tree induction? 1 / 1 point

- ○ An impurity measure is used to determine the best split for a node.
- ○ For each node, splits on all variables are tested to determine the best split for the node.
- ○ You want to split the data in a node into subsets that are as homogeneous as possible
- ◉ All of these statements are true of tree induction.

✓ **Correct**
That's correct!

7. What does 'naive' mean in Naive Bayes? 1 / 1 point

- ◉ The model assumes that the input features are statistically independent of one another. The 'naïve' in the name of classifier comes from this naïve assumption.
- ○ The full Bayes' Theorem is not used. The 'naive' in naive bayes specifies that a simplified version of Bayes' Theorem is used.
- ○ The Bayes' Theorem makes estimating the probabilities easier. The 'naïve' in the name of classifier comes from this ease of probability calculation.

✓ **Correct**
That's correct!

8. The feature independence assumption in Naive Bayes simplifies the classification problem by 1 / 1 point

- ○ assuming that the prior probabilities of all classes are independent of one another.
- ○ assuming that classes are independent of the input features.
- ○ ignoring the prior probabilities altogether.
- ◉ allowing the probability of each feature given the class to be estimated individually.

✓ **Correct**
That's correct!