Practice Quiz: Other Supervised Learning Models
Practice Assignment • 10 min

Your grade: 100%

Your latest: **100%** • Your highest: **100%** • To pass you need at least 60%. We keep your highest score.

Next item →

1. What does the k parameter in k-NN represent? 1 / 1 point

- ○ The number of features in the data
- ◉ The number of nearest neighbors used for prediction
- ○ The number of classes in the data
- ○ The distance measure used to calculate similarity

Correct
k is the count of nearest neighbors considered when making a prediction.

2. What is the primary purpose of scaling features before applying k-NN? 1 / 1 point

- ◉ To ensure all features contribute equally to the distance measure
- ○ To reduce the total number of features
- ○ To make computation faster
- ○ To give more weight to features with higher values

Correct
Scaling ensures that no single feature unfairly influences the distance metric.

3. What is the primary goal of an SVM classifier in a binary classification task? 1 / 1 point

- ○ To find multiple hyperplanes for each class
- ○ To minimize the number of support vectors needed
- ○ To find a line that passes through the majority of data points
- ◉ To create a hyperplane that maximizes the margin between two classes

Correct
SVM finds a hyperplane that maximizes the margin between classes to improve separation.

4. What is the role of the C parameter in SVM? 1 / 1 point

- ○ It determines the dimensionality of the data space
- ○ It sets the number of support vectors
- ○ It defines the kernel function used for the SVM
- ◉ It controls the width of the margin by allowing some misclassifications

Correct
C sets the tradeoff between a wide margin and tolerating misclassifications.

5. What does bias refer to in the context of predictive modeling? 1 / 1 point

- ○ The degree of complexity of the model
- ○ The number of support vectors in a model
- ◉ The average difference between predicted values and actual target values
- ○ The variability of the model's predictions across different datasets

Correct
Bias measures how far off the model's predictions are from the true values on average.