Practice Quiz: Logistic Regression
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 is the primary purpose of logistic regression in machine learning? 1 / 1 point

- (●) Classify based on the predicted probability of an observation belonging to one of two classes
- ( ) Reduce the dimensionality of data
- ( ) Predict continuous values
- ( ) Create linear regression models

Correct
Logistic regression predicts the probability of an observation belonging to one of two classes, such as true or false, and assigns the class using a threshold probability

2. What kind of outcomes does logistic regression predict? 1 / 1 point

- ( ) Only numerical values
- (●) Binary classification
- ( ) Multiple classes simultaneously
- ( ) Random outcomes without a clear pattern

Correct
Logistic regression predicts the probability that observations belong to one of two classes, such as true or false, and classifies it using a threshold

3. Which parameter is used in logistic regression to determine the class of an observation? 1 / 1 point

- ( ) Mean of all observations
- ( ) Linear regression
- (●) Threshold probability
- ( ) Highest numerical value

Correct
Logistic regression assigns classes based on a threshold probability to differentiate between the two classes.

4. What is the primary objective of the logistic regression training process? 1 / 1 point

- ( ) Randomly select parameters without any training
- ( ) Achieve the highest possible accuracy in all classes
- (●) Minimize the cost function, or log-loss
- ( ) Create multiple decision boundaries for classification

Correct
The main objective of logistic regression training is to minimize the cost function (log-loss) to improve class predictions.

5. A data scientist is using logistic regression to predict customer churn. After evaluating the model, they notice a high log-loss value. What is the most appropriate first step to improve the model? 1 / 1 point

- (●) Parameter tuning
- ( ) Feature selection
- ( ) More data
- ( ) Use a different activation function

Correct
Adjusting the model's parameters can directly address the high log-loss value and improve performance.