Logistic Regression: Test Your Knowledge

Let's do a quick test! You must answer at least 4 questions correctly to pass this quiz.

1. Why is a linear regression model's output a poor predictor of probability?

- ○ It only has one weight per feature.
- ○ It only has one output value.
- ○ The bias parameter skews the output value.
- ◉ Its predictions are not restricted to values between 0 and 1.

✓ Probabilities are represented using a range from 0 to 1, where a value of 0 indicates a 0% chance of an event occurring and a value of 1 indicates a 100% chance of an event occurring. Linear regression models don't restrict their output to a range from 0 to 1.

2. True or false: A sigmoid function never outputs the value 0 or the value 1.

- ◉ True

✓ A sigmoid function always outputs a value between 0 and 1, but never the exact values 0 or 1.

- ○ False

3. True or false: Applying regularization is less important when training logistic regression models than it is for training linear regression models.

- ○ True
- ◉ False

✓ Applying regularization is generally considered to be more important, not less important, when training logistic regression models vs. linear regression models.

4. Which of the following options matches both Linear Regression and Logistic Regression with appropriate loss functions for calculating loss?

- ○ **Linear Regression:** Mean squared error
  Logistic Regression: Mean squared error
- ○ **Linear Regression:** Mean squared error
  Logistic Regression: Mean absolute error
- ◉ **Linear Regression:** Mean squared error
  Logistic Regression: Log Loss

✓ Mean squared error is a common loss function used to evaluate linear regression models, and Log Loss is typically used to evaluate logistic regression models.

- ○ **Linear Regression:** Log Loss
  Logistic Regression: Mean squared error

5. Which of the following is an effective regularization technique for logistic regression models?

- ○ Dropout regularization
- ○ Late stopping
- ◉ Early stopping

✓ Early stopping is a regularization technique in which model training is stopped while loss values are still decreasing, which can help prevent overfitting.

- ○ Gradient descent

Results

You scored 5 out of 5. Congratulations! You have passed this quiz.

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Machine Learning Crash Course: Logistic regression!

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