SupervisedMachineLearning-WEEK-3-QUIZ-3

Link: SupervisedMachineLearning-WEEK-3-QUIZ-3

Your grade: 100%

Your latest: **100%** • Your highest: **100%** • To pass you need at least 80%. We keep your highest score.

Next item →

1 / 1 point

Gradient descent for logistic regression

repeat {

$$w_j = w_j - \alpha \left[\frac{1}{m} \sum_{i=1}^{m} \left(f_{\vec{w},b}\left(\vec{x}^{(i)}\right) - y^{(i)} \right) x_j^{(i)} \right]$$

$$b = b - \alpha \left[\frac{1}{m} \sum_{i=1}^{m} \left(f_{\vec{w},b}\left(\vec{x}^{(i)}\right) - y^{(i)} \right) \right]$$

} simultaneous updates

$$f_{\vec{w},b}\left(\vec{x}\right) = \frac{1}{1 + e^{-(\vec{w} \cdot \vec{x} + b)}}$$

1. Which of the following two statements is a more accurate statement about gradient descent for logistic regression?

   - ○ The update steps are identical to the update steps for linear regression.
   - ◉ The update steps look like the update steps for linear regression, but the definition of $f_{\vec{w},b}(\mathbf{x}^{(i)})$ is different.

   Correct
   For logistic regression, $f_{\vec{w},b}(\mathbf{x}^{(i)})$ is the sigmoid function instead of a straight line.