Gradient descent for logistic regression

- Due No due date
- Points 10
- Questions 1
- Time Limit None
- Allowed Attempts Unlimited

Instructions

You can have multiple attempt on this quiz to improve your score. Only the highest score will be recorded.

Take the Quiz Again

Attempt History

	Attempt	Time	Score
KEPT	Attempt 4	less than 1 minute	10 out of 10
LATEST	Attempt 4	less than 1 minute	10 out of 10
	Attempt 3	less than 1 minute	10 out of 10
	Attempt 2	1 minute	10 out of 10
	Attempt 1	less than 1 minute	10 out of 10

Score for this attempt: 10 out of 10
Submitted Nov 2 at 6:41pm
This attempt took less than 1 minute.

Question 1
10 / 10 pts

Repeat for $\mathrm{j} = 1,2,\ldots,\mathrm{n}$ {

$$w_j = w_j - \alpha \frac{\partial}{\partial w_j} J(\vec{w}, b); \qquad \frac{\partial}{\partial w_j} J(\vec{w}, b) = \frac{1}{m} \sum_{i=1}^{m} \left(f_{\vec{w},b}\left(\vec{x}^{(i)}\right) - y^{(i)} \right) x^{(i)}$$

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

} simultaneous updates

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

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

Correct!

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

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

- [ ] The update steps are identical to the update steps for linear regression.

Quiz Score: 10 out of 10