

Cost function for logistic regression

- Due No due date
- Points 20
- Questions 2
- 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	20 out of 20
LATEST	Attempt 4	less than 1 minute	20 out of 20
	Attempt 3	less than 1 minute	20 out of 20
	Attempt 2	less than 1 minute	20 out of 20
	Attempt 1	1 minute	10 out of 20

Score for this attempt: 20 out of 20

Submitted Nov 2 at 6:40pm

This attempt took less than 1 minute.



Question 1

10 / 10 pts

$$J(\vec{w}, b) = \frac{1}{m} \sum_{i=1}^m L(f_{\vec{w}, b}(\vec{x}^{(i)}), y^{(i)})$$

In this lecture series, "cost" and "loss" have distinct meanings. Which one applies to a single training example?

Correct!

☒ Loss

In these lectures, loss is calculated on a single training example. It is worth noting that this definition is not universal. Other lecture series may have a different definition.

☐ Cost

☐ Both Loss and Cost

☐ Neither Loss nor Cost



Question 2

10 / 10 pts

For simplified Cost function, if the label $y^{(i)} = 0$, then what does this expression simplify to?

$$L(f_{\vec{w},b}(\vec{x}^{(i)}), y^{(i)}) = -y^{(i)} \log(f_{\vec{w},b}(\vec{x}^{(i)})) - (1 - y^{(i)}) \log(1 - f_{\vec{w},b}(\vec{x}^{(i)}))$$

☐ $\log(f_{\vec{w},b}(\mathbf{x}^{(i)}))$

Correct!

☒ $-\log(1 - f_{\vec{w},b}(\mathbf{x}^{(i)}))$

When $y^{(i)} = 0$, the first term reduces to zero.

☐ $-\log(1 - f_{\vec{w},b}(\mathbf{x}^{(i)})) - \log(1 - f_{\vec{w},b}(\mathbf{x}^{(i)}))$

☐ $\log(1 - f_{\vec{w},b}(\mathbf{x}^{(i)})) + \log(1 - f_{\vec{w},b}(\mathbf{x}^{(i)}))$

Quiz Score: 20 out of 20