

# Logistic Regression

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1.

Suppose that you have trained a logistic regression classifier, and it outputs on a new example  $x$  a prediction  $h_{\theta}(x) = 0.7$ . This means (check all that apply):

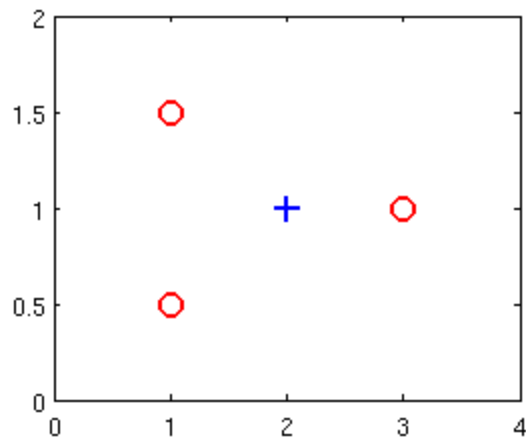


0 / 1  
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2.

Suppose you have the following training set, and fit a logistic regression classifier  $h_{\theta}(x) = g(\theta_0 + \theta_1 x_1 + \theta_2 x_2)$ .

$x_1$	$x_2$	$y$
1	0.5	0
1	1.5	0
2	1	1
3	1	0



Which of the following are true? Check all that apply.



1 / 1  
points

3.

For logistic regression, the gradient is given by

$\frac{\partial}{\partial \theta_j} J(\theta) = \frac{1}{m} \sum_{i=1}^m (h_{\theta}(x^{(i)}) - y^{(i)}) x_j^{(i)}$ . Which of these is a correct gradient descent update for logistic regression with a learning rate of  $\alpha$ ? Check all that apply.



1 / 1  
points

4.

Which of the following statements are true? Check all that apply.

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1 / 1  
points

5.

Suppose you train a logistic classifier  $h_{\theta}(x) = g(\theta_0 + \theta_1 x_1 + \theta_2 x_2)$ . Suppose  $\theta_0 = 6, \theta_1 = 0, \theta_2 = -1$ . Which of the following figures represents the decision boundary found by your classifier?

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