Quiz 5

This is a preview of the published version of the quiz

Started: Oct 5 at 9:44am

Quiz Instructions

You will have 30 minutes to complete this quiz once you start. You will have 2 attempts to deal with any potential technical difficulties you may have.

Question 1 2 pts

True/False: The perceptron algorithm will always converge. Briefly explain.

False. If the data is not linearly separable it will run forever.

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12pt Paragraph

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Question 2 2 pts

True/False: The ordering of training samples has no effect on the output of the perceptron algorithm. Briefly explain.

False. The ordering of the data affects the final output of the model.

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Question 3

2 pts

What is the function of b in the perceptron model ($a = wx + b$)?

B serves as a bias term, which we can think of as a threshold.

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Question 4

4 pts

Give the weights and bias for a perceptron that perfectly solves the logical AND problem. That is, it perfectly separates the binary data below (which represents the AND function). Note that I did not ask you to give the results of running the perceptron algorithm.

x_1	x_2	y
-1	-1	-1
-1	1	-1
1	-1	-1
1	1	1

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12pt Paragraph

p 0 words

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