



EN.605.647.83.SP21 Neural Networks

Course Modules ...

Lectures and Quizzes

Review Test Submission: Quiz

8.2

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User	BRIAN THOMAS LOUGHRAN
Course	EN.605.647.81.SP21 Neural Networks
Test	Quiz 8.2
Started	3/17/21 5:55 PM
Submitted	3/22/21 7:57 PM
Due Date	3/23/21 11:59 PM
Status	Completed
Attempt Score	12 out of 14 points
Time Elapsed	122 hours, 1 minute
Instructions	You should complete this quiz after viewing recorded lectures 8.3 and 8.4.
Results Displayed	Submitted Answers, Feedback, Incorrectly Answered Questions

Question 1

2 out of 2 points



In Hopfield networks, a state of a node is either 1 or -1.

Selected Answer: True

Response Feedback: Correct.

Question 2

3 out of 3 points



In Hopfield networks, inhibition is embodied in the network because

Selected Answer: The state variables can have the value of -1.

Response Feedback: Correct.

Question 3

2 out of 2 points



Before the Z function (the function that zeros out the diagonal elements) is applied to a weight matrix of a Hopfield network, the diagonal elements of that weight matrix are all 1's because

Selected

Answer: based on the outer product calculation and for any vector element i , w_{ij} is either -1×-1 or 1×1 both of which equals 1.

Response Feedback: Correct.

Question 4

0 out of 2 points



After a matrix-vector multiplication and application of the hard-limiting activation function in a Hopfield network using bi-polar state variables, the state vector can never have an element equal to zero.

Selected Answer: False

Response Feedback: Incorrect. By definition of the hard-limiting function, it's impossible to be 0.

Question 5

3 out of 3 points



Asynchronous updating essentially involves

Selected

Answer: updating a single state variable by taking the inner product of a row in the weight matrix and the state column vector and then applying the hard-limiting function.

Response Feedback: Correct.

Question 6

2 out of 2 points



The value of the Hecht-Nielsen function always decreases with each iteration.

Selected Answer: False

Response Feedback: Correct. It can sometimes remain the same.

Monday, March 22, 2021 7:57:38 PM EDT

← OK