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Assignment 2

The due date for submitting this assignment has passed.

Due on 2021-02-07, 23:59 IST.

Assignment submitted on 2021-02-07, 12:06 IST

1) Which of the following two input Boolean logic function/s is/are linearly inseparable? ***1 point***

- [ ] AND
- [ ] NAND
- [x] XOR
- [x] NOT XOR

Yes, the answer is correct.
Score: 1
Accepted Answers:
XOR
NOT XOR

2) A MLP with a single hidden layer can represent Boolean functions irrespective of whether they are linearly separable or inseparable. ***1 point***

- ( ) True
- (•) False

No, the answer is incorrect.
Score: 0
Accepted Answers:
True

3) The layer which contains perceptron's in MLP is called as _____ ***1 point***

- Output layer
- Middle layer
- Hidden layer
- Input layer

Yes, the answer is correct.
Score: 1
Accepted Answers:
Hidden layer

4) The values produced by the sigmoid function lies between the range _____ ***1 point***

- 0 to 1
- 1 to 3
- 0 to 2
- 0 to 4

Yes, the answer is correct.
Score: 1
Accepted Answers:
0 to 1

5) Gradient Descent rule says that the direction ‘u’ that we intend to move in should be at 60° with respect to the gradient. ***1 point***

- True
- False

Yes, the answer is correct.
Score: 1
Accepted Answers:
False

6) The algorithm/s which help us to learn the parameters of the sigmoid neurons starting from random values is/are _____ ***1 point***

- Perceptron learning algorithm.
- Gradient descent learning algorithm.
- Both Perceptron learning algorithm and Gradient descent learning algorithm can be used.
- None of these.

No, the answer is incorrect.
Score: 0
Accepted Answers:
Both Perceptron learning algorithm and Gradient descent learning algorithm can be used.

7) Identify the property/ies which is/are applicable to sigmoid neuron. ***1 point***

- [x] Smooth.
- [x] Continuous.
- [x] Differentiable.
- [ ] None of these.

week 10

Week 11

Week 12

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Yes, the answer is correct.
Score: 1
Accepted Answers:
Smooth.
Continuous.
Differentiable.

8) S_1 and S_2 are two statements related to Gradient Descent, choose the correct option. ***1 point***

S_1: Gradient Descent is an optimization algorithm for finding a local minimum of a differentiable function.
S_2: The logic is to take repeated steps in the direction of the gradient of the function at the current point.

- S_1 is true and S_2 is false.
- S_1 is false and S_2 is true.
- Both S_1 and S_2 are true.
- Both S_1 and S_2 are false.

No, the answer is incorrect.
Score: 0
Accepted Answers:
S_1 is true and S_2 is false.

9) As number of inputs increases, the number of perceptron's in the hidden layer also increases exponentially. ***1 point***

- True
- False

Yes, the answer is correct.
Score: 1
Accepted Answers:
True

10) An MLP consists of at least _____ layers of nodes. ***1 point***

- Two
- Three
- Four
- None of these

Yes, the answer is correct.
Score: 1
Accepted Answers:
Three