X

Week 1: Assignment 1

The due date for submitting this assignment has passed.

Due on 2022-08-10, 23:59 IST.

Assignment submitted on 2022-08-07, 13:32 IST

1) Pick out the appropriate shape of decision boundary if the number of inputs is three. ***1 point***

- Point
- Line
- Plane
- Hyperplane

No, the answer is incorrect.
Score: 0

Accepted Answers:
Plane

2) Pick out the one in biological neuron that is responsible for receiving signal from other neurons. ***1 point***

- Dendrite
- Synapse
- Soma
- Axon

Yes, the answer is correct.
Score: 1

Accepted Answers:
Dendrite

Week 11 ()

Week 12 ()

Download Videos ()

Books ()

Text Transcripts ()

Live Sessions ()

Problem Solving Session ()

3) Which of the following is considered as a drawback of Deep Learning? ***1 point***

- Numerical stability
- Overfitting never occurs
- Sharp minima
- Overfitting always occurs

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

4) Neurons play a vital role in how humans respond to the outside world. When does this occur? ***1 point***

- Any one neuron gets activated
- All the neurons of massively parallel interconnected network of neurons are activated.
- Specific set of these neurons fire and relay the information to other neurons
- At least 10% of the total number of neurons in the brain

Yes, the answer is correct.
Score: 1
Accepted Answers:
Specific set of these neurons fire and relay the information to other neurons

5) Consider a Mc Culloch Pitts Neuron for which the inputs are $x_1, x_2 \text{ and } x_3$. Also, the aggregate function $g(x)$ is an OR function. What is the thresholding parameter for the same? ***1 point***

- 0
- 1
- 2
- 3

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

6) Which of the following statements are True? ***1 point***

Statement I. Mc. Culloch Pitts neuron can be used to represent any boolean function
Statement II. If any of the inputs in a Mc. Culloch Pitts Neuron is inhibitory, then output will be zero

- Only I
- Only II
- Both
- None

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

7) Pick out the boolean function that is not linearly separable. ***1 point***

- ○ AND
- ○ OR
- ○ NOR
- ◉ XOR

Yes, the answer is correct.
Score: 1

Accepted Answers:
XOR

8) In a perceptron learning algorithm, what is the initial value of the weights before the algorithm starts learning? ***1 point***

- ○ All weights set to zero
- ○ All weights set to one
- ◉ All weights assigned random values
- ○ All weights assigned values specific to the application in hand

Yes, the answer is correct.
Score: 1

Accepted Answers:
All weights assigned random values

9) What is the condition for convergence of a perceptron learning algorithm? ***1 point***

- ○ Always converges
- ◉ Data is linearly separable
- ○ Data is linearly non-separable
- ○ May or may not converge depending on the data

Yes, the answer is correct.
Score: 1

Accepted Answers:
Data is linearly separable

10) Select all the statements that hold TRUE for a Single Perceptron. ***1 point***

- ☑ Inputs are weighted
- ☐ Threshold is hand coded
- ☐ Only Real inputs are allowed
- ☑ Both Real and boolean inputs are allowed
- ☑ Can solve only linearly separable data

Yes, the answer is correct.
Score: 1

Accepted Answers:
Inputs are weighted
Both Real and boolean inputs are allowed
Can solve only linearly separable data