Unit 10 - Week 8

Assignment 8

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2020-03-25, 23:59 IST.

1) Which of the following are correct w.r.t tanh activation function? *1 point*

I. Compress all inputs to range [-1,1]
II. Zero centered
III. Causes gradients to vanish.
IV. Computationally expensive

- I
- I, II, III
- I, II, III, IV
- II, III, IV

No, the answer is incorrect.
Score: 0
Accepted Answers:
I, II, III, IV

2) Which of the following are correct w.r.t ReLU activation function? *1 point*

I. Does not saturate in positive region
II. Computationally expensive
III. converges faster than tanh and sigmoid function

- I
- I, II
- I, III
- II, III
- I, II, III

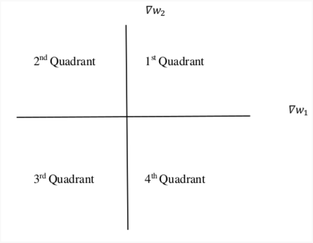
No, the answer is incorrect.
Score: 0
Accepted Answers:
I, III

3) ReLU is a linear function. *1 point*

- True
- False

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

4) Consider the gradient w.r.t w1 and w2. Which of the following(s) is/are NOT allowed with respect to updating of direction/movement? *1 point*



I. 1st quadrant
II. 2nd quadrant
III. 3rd quadrant
IV. 4th quadrant

- I, II
- I, II, III
- II, IV
- I, III

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

5) Which of the following are correct in terms of sigmoid neurons? *1 point*

I. Saturated neurons cause gradients to vanish.
II. Sigmoids are zero centered
III. Sigmoids are computationally expensive.

- I
- I, II
- I, III
- I, II, & III

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

6) Consider the following Parametric Relu function, *1 point*

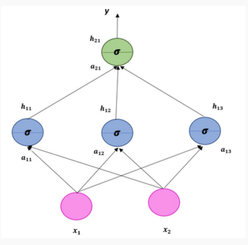
$$f(x) = max(\alpha x, x)$$

Here the parameter α gets updated during backpropagation.

- True
- False

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

7) Which of the following is CORRECT regarding initialisation of weights for the given network to avoid Symmetry breaking problem? *1 point*



- Set Maximum value for both weights
- Avoid setting zero for both weights
- Avoid equal non-zero values for both weights
- Both B & C

No, the answer is incorrect.
Score: 0
Accepted Answers:
Both B & C

8) The Learning process would be hard if across the mini-batches the distribution of h3 keeps changing. Identify a possible solution. *1 point*

- Pre-activation at every layer were unit gaussian
- Pre-activation at layer h2 were unit gaussian
- Pre-activation at no layer was unit gaussian
- Pre-activation at layer h4 were unit gaussian

No, the answer is incorrect.
Score: 0
Accepted Answers:
Pre-activation at every layer were unit gaussian

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

I. Pre-training is more robust than random initialisation
II. Pre-training leads to better weight initialisation

- I only
- II only
- Both
- None

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

10) For which value(s) of $\sigma(x)$, a sigmoid neuron is said to have saturated? *1 point*

- 0
- 1
- 0 or 1
- -1

No, the answer is incorrect.
Score: 0
Accepted Answers:
0 or 1