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Assignment 8

The due date for submitting this assignment has passed.

Due on 2021-03-17, 23:59 IST.

Assignment submitted on 2021-03-17, 22:57 IST

1) The learning algorithm used to train a deep and wide Neural Networks is _____ ***1 point***

- Gradient Descent
- Gradient Descent and chain rule
- Back Propagation
- Mini-Batch Gradient

Yes, the answer is correct.
Score: 1

Accepted Answers:
Back Propagation

2) The gradient with respect to a parameter is proportional to the input to the parameter. ***1 point***

- True
- False

Yes, the answer is correct.
Score: 1

Accepted Answers:
True

3) S_1 and S_2 are two statements related to Back Propagation. ***1 point***

S_1. Even after a large number of epochs the training might not converge.

S_2. When used for really deep networks it may not be very successful.

Choose the correct answer:

- 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.

Yes, the answer is correct.
Score: 1
Accepted Answers:
Both S_1 and S_2 are true.

4) The process of taking input(x) feeding it to the transformation hidden representation(h1) trying to reconstruct x from h1 is known as **1 point**

- Mini-Batch Gradient
- Back propagation
- Order Encoding
- None of the above

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

5) S_1 and S_2 are two statements related to Universal Approximation Theorem **1 point**

S_1: The error surface of the supervised objective of a Deep Neural Network is highly non-convex.

S_2: The large capacity of Deep Neural Network is still easy to land in one of the 0 error region.

Choose the correct option with respect to S_1 and S_2.

- 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.

Yes, the answer is correct.
Score: 1
Accepted Answers:
Both S_1 and S_2 are true.

6) The error surface of the supervised objective of a Deep Neural Network is_____ **1 point**

- Highly Convex.
- Highly Non-Convex.
- Slightly Convex.

None of these.

Yes, the answer is correct.
Score: 1
Accepted Answers:
Highly Non-Convex.

7) A Sigmoid neuron is said to have saturated value when **1 point**

- σ(x)=0
- σ(x)=1
- Both a and b
- None of these

Yes, the answer is correct.
Score: 1
Accepted Answers:
Both a and b

8) A large function of ReLU units can die, if the learning rate is set too high. **1 point**

- True
- False

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

9) S_1 and S_2 are two statements related to Leaky ReLU gradient, choose the correct option. **1 point**

S_1: No Saturation and close to zero centroid outputs.

S_2: Will not die and is computational efficient.

- 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.

Yes, the answer is correct.
Score: 1
Accepted Answers:
Both S_1 and S_2 are true.

10) S_1 and S_2 are two statements related to Convolutional Neural Networks, Choose the correct option. **1 point**

S_1: Sigmoids are bad for Convolutional Neural Networks.

S_2: ReLU is more or less the standard unit for Convolutional Neural Networks.

- 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.

Yes, the answer is correct.
Score: 1

Accepted Answers:
Both S_1 and S_2 are true.

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