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Assignment 10

The due date for submitting this assignment has passed.

Due on 2021-03-31, 23:59 IST.

Assignment submitted on 2021-03-31, 22:14 IST

1) In Convolutional Neural Networks, the depth of the filter is equal to the depth of the input. ***1 point***

- (•) True
- ( ) False

Yes, the answer is correct.
Score: 1

Accepted Answers:
True

2) Stride defines the intervals at which the filter is applied. ***1 point***

- (•) True
- ( ) False

Yes, the answer is correct.
Score: 1

Accepted Answers:
True

3) If a stride of 2 is done, what would be the output size and the final formula? ***1 point***

- (•) $W_2 = \frac{W_1 - F + 2P}{S} + 1$

- $W_2 = W_1 - F + 1.2P$
- $W_2 = W_1 - F + 2P + 1$
- None of these

Yes, the answer is correct.
Score: 1

Accepted Answers:
$W_2 = \frac{W_1 - F + 2P}{S} + 1$

4) If we use pad p=1 with 3X3 kernel, what is the size of the padding? ***1 point***

- $W_2 = W_1 + F + 1 + 2P$
- $W_2 = W_1 - F + 1 + 2P$
- $W_2 = W_1 - F + 1 - 2P$
- $W_2 = W_1 - F - 1 - 2P$

Yes, the answer is correct.
Score: 1

Accepted Answers:
$W_2 = W_1 - F + 1 + 2P$

5) If we have a 5X5 filter, if we want the output size to be same as the input size what should be the size of the padding? ***1 point***

- $W_2 = W_1 - 6 + 1 + 4$
- $W_2 = W_1 - 6 - 1 + 4$
- $W_2 = W_1 - 5 + 1 + 4$
- None of these

Yes, the answer is correct.
Score: 1

Accepted Answers:
$W_2 = W_1 - 5 + 1 + 4$

6) S_1 and S_2 are two statements related to Feed Forward Network, Choose the correct option. ***1 point***

S_1: Every output depends on every input.
S_2: The connection is denser.

- 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.

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

S_1: Convolutional Neural Networks reduces the number of parameters due to sparse connectivity.
S_2: Weight sharing is the characteristic of 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.

8) S_1 and S_2 are two statements related to Ideas of Inception Module, choose the correct option. ***1 point***

S_1: Apply multiple kernels of different size.
S_2: Use 1x1 convolution to make the whole computation manageable.

- 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.

9) Gradient $\frac{\partial hj}{\partial xi}$ would tell the influence ***1 point***

- $\frac{\partial hj}{\partial xi} = 0 \rightarrow$ No influence
- $\frac{\partial hj}{\partial xi}$ = large$\rightarrow$ High influence
- $\frac{\partial hj}{\partial xi}$ =small$\rightarrow$ small influence
- All of these

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

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All of these

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

S_1: In forward pass ReLU activation allows only positive values to pass and clamps negative to zero.

S_2: During backward pass no gradient passes through the dead ReLU neurons

- 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.