

Kahoot!

DL Lecture Quiz 6 (2021)

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A private kahoot

Questions (10)

1 - Quiz

CNNs are commonly preferred over MLPs when dealing with


30 sec

-  image data ✓
-  time-series data ✓
-  tabular data ✗
-  video data ✓

2 - Quiz

What was the first 2D convolutional neural network that was trained using backpropagation?





20 sec

-  LeNet 5 ✓
-  AlexNet ✗
-  ResNet ✗
-  Neocognitron ✗

3 - Quiz

Cross-correlation vs convolution:





30 sec

-  Makes no difference for performance of a learning algorithm ✓
-  Does not differ mathematically ✗
-  Cross-correlation always acts locally while convolution acts globally ✗
-  Cross-correlation **and** convolution always act globally ✗

4 - Quiz

For CNNs, which of the following is/are true?

30 sec

-  The receptive field increases as we move towards the output layers ✓
-  The receptive field decreases as we move towards the output layers ✗
-  Complex objects and features are detected closer to the input ✗
-  Edges and simpler features are detected closer to the input ✓

5 - Quiz

What is the output volume of a 2D convolution of a $32 \times 32 \times 3$ input volume with a 5×5 filter (stride 1, pad 2)?









30 sec

-  $32 \times 32 \times 1$ ✓
-  $36 \times 36 \times 1$ ✗
-  $28 \times 28 \times 3$ ✗
-  $31 \times 31 \times 3$ ✗

6 - Quiz

trainable parameters of a 2D convolution of a $32 \times 32 \times 3$ input volume with a 5×5 filter (stride 1, pad 2)?

30 sec

- | | | |
|--|---|---|
|  | 26 ($5 \times 5 + 1$) |  |
|  | 1.024 (32×32) |  |
|  | 76 ($5 \times 5 \times 3 + 1$) |  |
|  | 3.146.752 ($(32 \times 32 \times 3 + 1) \times (32 \times 32)$) |  |

7 - Quiz

In "valid convolution", what padding is used in an $F \times F$ convolution with stride 1?

30 sec

- | | | |
|--|-----------|---|
|  | $(F-1)/2$ |  |
|  | $F-1$ |  |
|  | F |  |
|  | 0 |  |

8 - Quiz

trainable parameters of a convolutional layer increases when

30 sec

- | | | |
|--|----------------------------|---|
|  | increasing the padding |  |
|  | decreasing the stride |  |
|  | increasing the filter size |  |
|  | increasing the # filters |  |

9 - Quiz

Which of the following can be used for upsampling?

30 sec

- | | | |
|--|-------------------------|---|
|  | pooling |  |
|  | transposed convolutions |  |
|  | 1x1 convolutions |  |
|  | grouped convolutions |  |

10 - Quiz

How many parameters are learned in a pooling layer?

20 sec

- | | | |
|--|--------------------------------|---|
|  | 0 |  |
|  | 1 |  |
|  | Equal to size of input volume |  |
|  | Equal to size of output volume |  |