Session 2 Quiz

Due Nov 25, 2019 at 5:30am **Points** 100 **Questions** 10
Available until Nov 25, 2019 at 5:30am **Time Limit** 46 Minutes

Instructions

Instructions:

1. You have 46 minutes to attempt the quiz
2. Once you start the quiz, you cannot go back and re-attempt it
3. You will not find answers online, so please make sure you are ready for the quiz
4. For Multiple Answer Questions, ALL the answers must be correct to score any point

This quiz was locked Nov 25, 2019 at 5:30am.

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	11 minutes	100 out of 100

Score for this quiz: **100** out of 100
Submitted Nov 25, 2019 at 5:13am
This attempt took 11 minutes.

Question 1 — 5 / 5 pts

(Mostly) whenever we see kernel visualizations online (or some other reference) we are actually seeing:

- [ ] How Kernels Look
- [x] What kernels extract
- [ ] Feature Maps

Correct!

Question 2

15 / 15 pts

What all do we need to consider when we decide the number of kernels in our 11x11 receptive field layer?

Correct! ☑ Hardware capacity

Correct! ☑ Inter and intra class variations

Correct! ☑ Expressivity required

☐ Total number of images in the dataset

Question 3

15 / 15 pts

What are the benefits of 1x1 Convolution?

Correct! ☑ Less number of parameters

☐ Easy way to increase the number of channels

Correct! ☑ Use of existing channels to create complex channels (instead of re-convolution)

Correct! ☑ Lesser computation requirement for reducing the number of channels

Question 4

15 / 15 pts

What all features does ReLU provide us?

Correct!

- [x] Easy way to communicate with BackProp to use negative values if that information needs to be filtered out

Correct!

- [x] Very low computation requirements

Correct!

- [x] Easy way to communicate with BackProp to use positive values if some information needs to be not filtered out

Question 5

5 / 5 pts

ReLU is defined as:

0 when x is less than or equal to zero
x when x is more than zero

Any activation function must be differentiable if we were to use it in our DNNs (else backprop would not work). Knowing that we indeed use ReLU, what do you think is the derivative of ReLU?

Correct!

- [x] 0 when x is less than or equal to zero, 1 when x is positive
- [ ] 0 when x is less than or equal to zero and x when x is more than zero
- [ ] 1 when x is less than or equal to zero, 0 when x is positive
- [ ] 0 when x is less than zero, not defined when x is equal to zero, and 1 when x is positive

Question 6

10 / 10 pts

Which of these is not true for dense layers?

Correct!
- [x] Dense Layers would be able to add Translational invariance to our networks

Correct!
- [x] Dense Layers would be able to add rotational invariance to our networks

Correct!
- [x] Dense layers would be able to reduce the number of parameters (generally)

Correct!
- [x] Dense Layers retain spatial information

Question 7

5 / 5 pts

Assume we have a layer with 100 channels, and each channel has a 7x7 resolution. If we need to add an FC layer with 10 outputs, how many parameters we would end up adding?

- [ ] 4900
- [ ] 490

Correct!
- [x] 49000
- [ ] 1000

Question 8

5 / 5 pts

The activations for class A, B and C before softmax were 10, 8 and 3.

The different in softmax values for class A and class B would be

Correct!

- [x] 76%
- [ ] 0.0008%
- [ ] 88%
- [ ] 12%

Question 9

5 / 5 pts

The images in our dataset are of size 100x100. Currently, you are at a layer where the resolution is 9x9. What all can you consider?

- [ ] Dense Layer
- [ ] MaxPooling

Correct!

- [x] Larger Kernel Size
- [ ] Increasing number of Kernels

Question 10

20 / 20 pts

Your model is overfitting. What all can be considerd?

- [ ] Changing Learning Rate

Correct!

- [x] Adding more training data (but not touching test images)
- [ ] Increasing number of layers

Correct! ☑ Adding/Changing Image Augmentation strategies

Correct! ☑ Adding Batch Normalization

☐ Changing the Optimizer

☐ Increasing number of kernels

Correct! ☑ Reducing number of kernels

Correct! ☑ Adding DropOut

☐ Going ahead with top_5 accuracies

Quiz Score: **100** out of 100