Session 3 Quiz

Due Dec 2, 2019 at 5:30am   **Points** 100   **Questions** 9

Available until Dec 2, 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
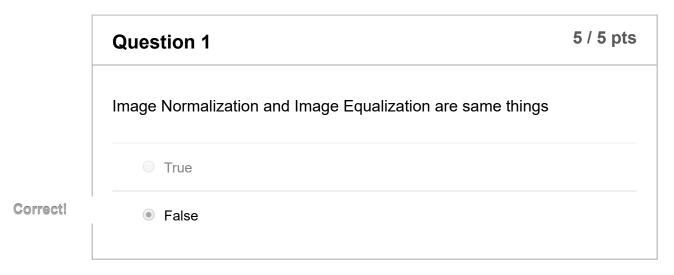4. For Multiple Answer Questions, ALL the answers must be correct to score any point

This quiz was locked Dec 2, 2019 at 5:30am.

Attempt History

	Attempt	Time	Score
LATEST	[Attempt 1](#)	7 minutes	100 out of 100

Score for this quiz: **100** out of 100
Submitted Dec 1, 2019 at 10:12pm
This attempt took 7 minutes.

Question 1	**5 / 5 pts**

Image Normalization and Image Equalization are same things

○ True

Correct!   ◉ False

Question 2	**10 / 10 pts**

Batch Normalization

Correct!   ☑ reduces need to get highly tuned hyper-parameters

Correct!   ☑ solves internal covariate shift

Correct!   ☑ helps train network faster

Correct!   ☑ helps train deeper networks

Question 3   5 / 5 pts

A layer has 32 channels. For BN it will

☐ have 1 mean and 1 variance

Correct!   ☑ have 32 means and 32 variance

Question 4   10 / 10 pts

If we use regularization:

Correct!   ☑ kernel values are going to be close to zero or small

☐ it is guaranteed to get higher training accuracy

Correct!   ☑ we can solve over-fitting

☐ it is guaranteed to get higher validation accuracy

Question 5

5 / 5 pts

If we create our data set in such a way that our images are automatically normalized then would we need BN?

Correct!

☑

Yes, BN has more to do with features than pixel intensities, and image normalization does not guarantee that all features would have normalized values

☐

No, BN would not be required as normalized images would have normalized features

Question 6

10 / 10 pts

Atrous or Dilated convolutions can be used for:

Correct!   ☑ Super Resolution related problems

Correct!   ☑ Image (or instance) segmentation

Correct!   ☑ Denoising images

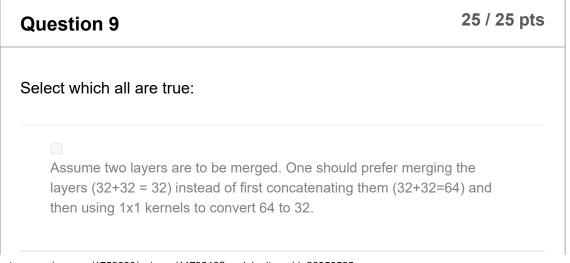**Correct!**   ☑ Keypoint Detection

Question 7

5 / 5 pts

Which is better for capturing global context?

Correct!

☑ Atrous Convolution

☐ Normal Convolution

Question 8   25 / 25 pts

Consider a layer with resolution 64x64x128. In the next layer, we intend to add normal 256 kernels of size 3x3. Assume this add X number of parameters.

If instead, we add depthwise separable convolution, we would add Y number of parameters.

The X:Y ratio is close or equal to?

Correct!

☑ 8.69:1

☐ 9:1

☐ 7.23:1

☐ 12.23:1

Question 9   25 / 25 pts

Select which all are true:

☐ Assume two layers are to be merged. One should prefer merging the layers (32+32 = 32) instead of first concatenating them (32+32=64) and then using 1x1 kernels to convert 64 to 32.

Correct!

☑ Spatially Separable Convolutions are preferred early in the network.

Correct!

☑

Grouped convolution should help in handling scenarios where object sizes might be different

Correct!

☑

Dilated Kernels are beneficials when "dense resolution" channels are expected in the network

Correct!

☑

Dilated convolutions would be better for Scene Classification network as compared to Object Detection Networks

Quiz Score: **100** out of 100