Instructions

Instructions:

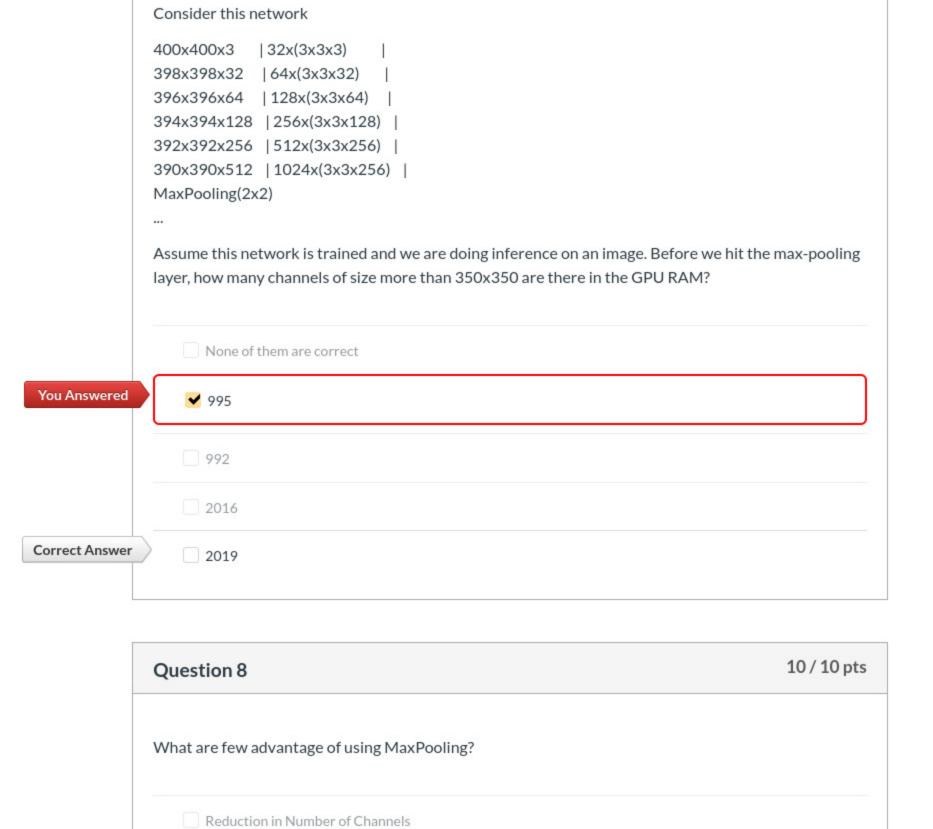
- 1. You have 30 minutes to attempt the quiz
- 3. You will not find answers online, so please make sure you are ready for the quiz

2. Once you start the quiz, you cannot go back and re-attempt it

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

Sometimes you might see multiple empty options. Please do not consider those empty options, that's some rendering issue, the options you

see are the only options available for that question. This quiz was locked Apr 5 at 6:30am. Attempt History Attempt Time Score LATEST 15 minutes 90 out of 100 Attempt 1 Score for this quiz: 90 out of 100 Submitted Apr 3 at 12:13pm This attempt took 15 minutes. Question 1 10 / 10 pts If we perform convolution with a kernel of size 3x3 on 47x49, the output size would be? 45x45 47x47 Convolution cannot be done Correct! √ 45x47 15 / 15 pts Question 2 Which of these are true, w.r.t. what we discussed in Session 2 Correct! We always use kernels with stride of 1 Correct! ▼ We add as many layers as required to reach full image/object size. Correct! ✓ We always use a kernel with size 3x3. We never add padding to our images 10 / 10 pts Question 3 How many 3x3 layers do we need to add to reach a receptive field of 21x21? 12 9 Correct! **✓** 10 11 10 / 10 pts Question 4 Let us assume we have an image of size 100x100. What is the minimum number of convolution layers do we need to add such that 1. you cannot use max-pooling without convolving twice or more 2. the output is at least 2-3 convolution layers away from max-pooling 3. You can stop either at 2x2 or 1x1 based on how you have used your layers 4. we will always "not consider" the last rows and columns in an odd-resolution channel while performing max-pooling) 5. "do not" count max-pooling layer Correct! **✓** 10 9 11 13 10 / 10 pts Question 5 If the input channels have 128 layers, how many kernels do we need to add? Correct! Number of Kernels do not depend on input channels. Exactly 128 10 / 10 pts Question 6 Consider the following layers 49x49x256 | Convolved with 512 kernels of size 3x3 | What is the total number of kernel parameters we just added? 2304 314703872 Correct! **✓** 1179648 4608 Question 7 0 / 10 pts



Correct!

Correct!

Correct!

Correct!

information.

Reduction in Channel Size

Slight Rotational Invariance

	15 / 15 pts
If we start with an image of 400x400 color, and during a model v the image size to 400>200>100>50 (we used convs with paddin size), have we lost 4 times the information we started with? At 5	g, so convs did not reduce the image
No, that is incorrect. Since image is actually 400x400x3, and we end	
400x400x3/50/50/1000 = 0.192. So we have actually gained around	d 5 times more information

scaling in Z axis (from 3 to 1000), and it is the increase in z axis where we store this "proposed" lost

Yes, that's correct, that is what information theory would predict