Graded Quiz: Applying Image Convolution

LATEST SUBMISSION GRADE

100%

1. What of the following statements are true about Convolutions EXCEPT: **1 / 1 point**

- [ ] A convolution extract features that show commonality in an image.
- [ ] A convolution is a mathematical operation between two functions producing a third convoluted function that is a modified version of the first function.
- [x] A convolution is a performs down-sampling by dividing the input into rectangular convolutional regions, and computing the maximum of each region.

Correct
This answer should be selected

- [x] A convolution operates upon each feature map separately to create a new set of the same number of convoluted feature maps.

Correct
This answer should be selected

- [ ] A convolution is a filter that passes over an image and processes the image.

2. An image is composed of arrays and pixels with height and width. **1 / 1 point**

- ( ) False
- (•) True

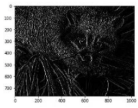
Correct
Correct!

3. From which library we take the 'misc' image to represent it? **1 / 1 point**

- ( ) OpenCV
- ( ) Pillow
- (•) Scipy
- ( ) Keras

Correct
Correct

4. Consider the following image for a Raccoon: **1 / 1 point**



What's applied to get this view of the Raccoon's image?

- ( ) Converting the image to 2D greyscale
- ( ) Applying pooling layers to the image
- (•) Applying Convolutional layers to the image
- ( ) Blurring the original image

Correct
Correct!

5. How we can visualize in Python every step of convolutions applied to an image? **1 / 1 point**

- ( ) Initializing the Variables
- (•) Creating Tensorflow operations
- ( ) Creating Numpy arrays
- ( ) Applying Activation Functions

Correct
Correct!

6. We can't use convolutions to blur and sharpen images. **1 / 1 point**

- (•) False
- ( ) True

Correct
Correct! We can use convolutions for blurring and sharpening images

7. Why do we apply Pooling to the image? **1 / 1 point**

- ( ) To reduce the shape of the image by cropping it while maintaining the features that are detected.
- ( ) To reduce the overall amount of information in an image and reducing the features that are detected.
- ( ) To reduce the shape of the image by cropping it and reducing the features that are detected.
- (•) To reduce the overall amount of information in an image while maintaining the features that are detected.

Correct
Correct!

8. What is true about Max Pooling? **1 / 1 point**

- [ ] It increases the number of pixels in the output from the previous convolutional layer
- [x] It reduces the dimensionality of images

Correct
This answer should be selected

- [x] It reduces the number of pixels in the output from the previous convolutional layer

Correct
This answer should be selected

- [x] It can be applied on 2D greyscale images

Correct
This answer should be selected

- [ ] It doesn't impact the dimensionality of images
- [ ] It can't be applied on 2D greyscale images