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Introduction and Concepts of Computer Vision
Graded Quiz • 30 min

English

Due Sep 3, 11:59 PM WIB

Congratulations! You passed!

Grade received 100%

Latest Submission Grade 100%

To pass 80% or higher

Go to next item

1. In a *Multi-Class* classification scenario, your model can identify all the different items and people that are present in a given input image.

1 / 1 point

○ True

● False

✓ **Correct**
Correct! The above statement is true for a *Multi-Label* classification.

2. Which of the following statements correctly describes the difference between *object detection* and *object localization*?

1 / 1 point

○ *Object detection* refers to detecting the object within an image, while *object localization* gives us the bounding box around that object.

○ *Object detection*is where you get a bounding box around the *main* subject of the image, while in *object localization* you get a bounding box around *all* of the objects within an image.

● *Object localization* is where you get a bounding box around the *main* subject of the image, while in *object detection* you get a bounding box around *all* of the objects within an image.

○ They both are the same.

✓ **Correct**
Correct!

3. What is the method that locates an object(s) by *labelling the pixels*, where *each similar object(s) is assigned to the same class*? Type your response here (two words, all lower case).

1 / 1 point

semantic segmentation

✓ **Correct**
Correct!

4. In the context of *Transfer Learning*, the initial training task where the model learns reusable patterns is called a *downstream task*.

1 / 1 point

● False

○ True

✓ **Correct**
Correct! The above statement is true for a *pre-training task*. The task for which the model is borrowed is called *downstream task*.

5. Check all the scenarios in which Transfer Learning could be beneficial.

1 / 1 point

□ To ensure better performance

☑ When you don't have enough data for the task you want to perform, which resembles another same or similar, already trained task.

✓ **Correct**
Correct!

☑ When the task you want to perform is a sub-task of an already trained, larger, model.

✓ **Correct**
Correct!

☑ To reduce computation and processing cost

✓ **Correct**
Correct!

6. What is the name of the built-in TensorFlow layer-type which you can use to increase the dimensions of a 2D image ?

1 / 1 point

○ SampleUp2D

● UpSampling2D

○ UpSampling

○ SampleIncrease

✓ **Correct**
Correct!

7. You have an image of dimensions 48 x 48, and you want to upscale it to 240 x 240 using the built-in TensorFlow layer-type which is used to perform such a task (mentioned in Question 6). What will you pass in as *size=____*?

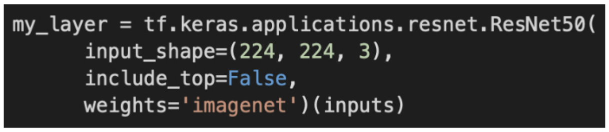
1 / 1 point

(5,5)

✓ **Correct**
Correct!

8. Consider the following code:

1 / 1 point



```
my_layer = tf.keras.applications.resnet.ResNet50(
        input_shape=(224, 224, 3),
        include_top=False,
        weights='imagenet')(inputs)
```

What does “include_top=False” mean ?

○ It discards the first layer of ResNet50 when initializing *my_layer* using it.

○ It randomly sets up the weights, instead of using that of ImageNet, for the top most dense layers of ResNet50 when initializing *my_layer* using it.

○ It sets the top most layers as untrainable of ResNet50 when initializing *my_layer* using it.

● It discards the top most layers of ResNet50 when initializing *my_layer* using ResNet50.

✓ **Correct**
Correct!

9. What is the name of the technique used in the output dense layer that is used to predict Bounding Boxes ? (Hint: It is a one word answer)

1 / 1 point

regression

✓ **Correct**
Correct!

10. Check all the statements that are true regarding Intersection Over Union (IoU), with regards to Bounding Boxes.

1 / 1 point

☑ The closer the value of IoU is to 0 the poorer is the prediction of the bounding box.

✓ **Correct**
Correct! The lesser the area of intersection the closer to 0 will be the value of IoU

☐ The values of IoU range from 0 to *all* possible *positive* values.

☐ The closer the value of IoU is to 0 the better is the prediction of the bounding box.

☑ IoU is the area of intersection of the two boxes (true and predicted) divided by the total union area of the two boxes.

✓ **Correct**
Correct!