Started on	Saturday, 9 October 2021, 10:05 AM
State	Finished
Completed on	Saturday, 9 October 2021, 11:01 AM
Time taken	56 mins 26 secs
Marks	39.00/40.00
Grade	**9.75** out of 10.00 (**97.5**%)

Question **1**

Correct

Mark 1.00 out of 1.00

If the following statement is true, then select "True" otherwise "False".

A good face detection system should have high detection rate and false positive rate.

Select one:

○ True

◉ False ✔

The correct answer is 'False'.

Question **2**

Correct

Mark 2.00 out of 2.00

If the following statement is true, then select "True" otherwise "False".

If the GAN continues training even though the loss isn't continuing to decrease then the model would never give good results in the future and we need to change the hyper-params and restart with better learning rate.

Select one:

○ True

◉ False ✔

The correct answer is 'False'.

Question **3**

Correct

Mark 2.00 out of 2.00

If the following statement is true, then select "True" otherwise "False".

In Yolo model, confidence score reflects the presence or absence of an object of any class.

Select one:

◉ True ✔

○ False

The correct answer is 'True'.

Question **4**

Correct

Mark 1.00 out of 1.00

If the following statement is true, then select "True" otherwise "False".

In Viola Jones algorithm face detection algorithm, training is slow but recognition is very fast.

Select one:

◉ True ✔

○ False

The correct answer is 'True'.

Question **5**

Correct

Mark 1.00 out of 1.00

In Hough Transform, we shift from Cartesian coordinates to polar coordinates because

○ a.   You can actually use both, polar are just smoother and more difrentiable

◉ b.   Slope is not bounded ✔

○ c.   Correct Answer is not present

Your answer is correct.

The correct answer is:

Slope is not bounded

Question **6**

Correct

Mark 1.00 out of 1.00

If the following statement is true, then select "True" otherwise "False".

GAN training is based on game theory and its procedures try to converge an approximate Nash equilibrium, but doing so sometimes it requires unreasonably large resource constraints.

Select one:

◉ True ✔

◯ False

The correct answer is 'True'.

Question **7**

Incorrect

Mark 0.00 out of 1.00

If the following statement is true, then select "True" otherwise "False".

Instance Segmentation is a combination of object detection + semantic segmentation

Select one:

◯ True

◉ False ✘

The correct answer is 'True'.

Question **8**

Correct

Mark 1.00 out of 1.00

If the following statement is true, then select "True" otherwise "False".

Object detection task consists localization of the object only.

Select one:

◯ True

◉ False ✔

The correct answer is 'False'.

Question 9

Correct

Mark 1.00 out of 1.00

In an image, we have 10 faces suppose 6 are correctly identified and 4 are false identified by your algorithm. What is detection rate?

○ a. 40

○ b. 80

◉ c. 60 ✔

Your answer is correct.

The correct answer is:
60

Question 10

Correct

Mark 2.00 out of 2.00

If the following statement is true, then select "True" otherwise "False".

Convolutional neural network can work on raw images as well as extracted features

Select one:
◉ True ✔

○ False

The correct answer is 'True'.

Question 11

Correct

Mark 2.00 out of 2.00

If the following statement is true, then select "True" otherwise "False".

Intersection over Union (IoU) is used as a replacement of mean Average Precision (mAP) to evaluate Object detection models because mAP works only for classification.

Select one:
○ True

◉ False ✔

The correct answer is 'False'.

Question **12**

Correct

Mark 2.00 out of 2.00

Select which are a wrong description of the attentional cascade classifier in Viola Johns algorithm

- ⦿ a.   None of the above ✔

- ○ b.
       Reduces the false positive rate

- ○ c.   Chain classifier

- ○ d.   Complex classifier (decision boudary)

Your answer is correct.

The correct answer is:
None of the above

Question **13**

Correct

Mark 4.00 out of 4.00

As a computer vision expert, you are going to apply YOLO technique to detect three classes (i.e., car, pedestrian and traffic signal) for humanoid robot. <u>What will be the size of output vector (flattened representation of the output of YOLO at one scale (L,M,S))?</u> If you are going to divide video frame into a grid of 7 by 7 and each cell can predict two bounding boxes.

- ○ a.   3

- ○ b.   6

- ⦿ c.   784 ✔

- ○ d.   49

Your answer is correct.

The correct answer is:
784

Question **14**

Correct

Mark 1.00 out of 1.00

If the following statement is true, then select "True" otherwise "False".

In GAN, the design of the Generator (G) has strong restrictions and we cannot incorporate a recurrent neural network in it.

Select one:

○ True

◉ False ✔

The correct answer is 'False'.

Question **15**

Correct

Mark 1.00 out of 1.00

If the following statement is true, then select "True" otherwise "False".

Transfer learning provides better results much faster than training from scratch.

Select one:

◉ True ✔

○ False

The correct answer is 'True'.

Question **16**

Correct

Mark 3.00 out of 3.00

If the following statement is true, then select "True" otherwise "False".

Domain Adaptation allows you to get better results than Transfer Learning but it reqires a lot more data sources than transfer learning.

Select one:

○ True

◉ False ✔

The correct answer is 'False'.

Question **17**

Correct

Mark 1.00 out of 1.00

If the following statement is true, then select "True" otherwise "False".

Fully Convolutional Neural Networks for semantic segmentation don't use dense layers **in general** *but* must be used with dense layers in order to make instance segmentation.

Select one:

○ True

◉ False ✔

The correct answer is 'False'.

Question **18**

Correct

Mark 1.00 out of 1.00

If the following statement is true, then select "True" otherwise "False".

In GAN, Discriminator is trying to maximize its reward, while Generator is trying to minimize Discriminator's reward.

Select one:

◉ True ✔

○ False

The correct answer is 'True'.

Question **19**

Correct

Mark 2.00 out of 2.00

If the following statement is true, then select "True" otherwise "False".

GAN care about explicitly modelling the density function

Select one:

○ True

◉ False ✔

The correct answer is 'False'.

Question **20**

Correct

Mark 2.00 out of 2.00

If the following statement is true, then select "True" otherwise "False".

VAE cares about explicitly modeling the density function

Select one:

◉ True ✔

○ False

The correct answer is 'True'.

Question **21**

Correct

Mark 1.00 out of 1.00

Consider you have two points P1, P2.

How will each one of them be mapped in the cartesian parameter space

○ a.   A point

◉ b.   A line ✔

○ c.   A matrix

○ d.   A Sinusoidal function

Your answer is correct.

The correct answer is:
A line

Question **22**

Correct

Mark 1.00 out of 1.00

Given two points P1, P2, we map them to the cartesian parameter space.

We can find the line that passes through both of them by finding the intersection of their mapped representation in the parameter space.

Select one:

◉ True ✔

○ False

The correct answer is 'True'.

Question **23**

Correct

Mark 3.00 out of 3.00

In mathematics we know that all two points have a line that passes through them, does that mean that for all two points we can find an intersection in the cartesian space?

Select one:

○ True

◉ False ✔

The correct answer is 'False'.

Question **24**

Correct

Mark 3.00 out of 3.00

In mathematics we know that all two points have a line that pass through them, does that mean that for all two points we can find an intersection in the polar space?

Select one:

◉ True ✔

○ False

The correct answer is 'True'.