State	Finished
Completed on	Monday, 21 November 2022, 8:36 PM
Time taken	17 mins 44 secs
Grade	**15.00** out of 15.00 (**100**%)
Feedback	https://www.lnmiit.ac.in/

Question **1**
Correct
Mark 1.00 out of 1.00
Flag question

Which of the following statements is/are true?

a. Harris corner detector is invariant to affine intensity change.

b. Maximum change in laplacian response for a binary circle of radius r occurs at $\frac{r}{2}$.

c. The scale factor by which each image differ from next image in an octave for SIFT oper

d. Harris corner detector is rotational invariant. ✔

Your answer is correct.

The correct answer is:
Harris corner detector is rotational invariant.

Question **2**

Your answer is correct.

The correct answer is:

Harris corner detector is rotational invariant.

Question 2

Correct

Mark 1.00 out of 1.00

Flag question

If the 2D shape is scaled (with respect to origin) by a factor S, then its Fourier Descriptor w

- a. scaled by S
- b. Double
- c. Same ✔
- d. Halved

Your answer is correct.

The correct answer is:

Same

Question 3

Correct

Mark 1.00 out of 1.00

When did the concept of Perceptron started?

- a. 1970s

Your answer is correct.

The correct answer is:
Same

Question 3
Correct
Mark 1.00 out of 1.00
Flag question

When did the concept of Perceptron started?

a. 1970s
b. 1997
c. 1987
d. 1960s ✔

Your answer is correct.

The correct answer is:
1960s

Question 4
Correct
Mark 2.00 out of 2.00
Flag question

Which of the following factor(s) is/are responsible for edges in images?

a. Surface color/Appearance discontinuity

Your answer is correct.

The correct answer is:
1960s

Question 4
Correct
Mark 2.00 out of 2.00
Flag question

Which of the following factor(s) is/are responsible for edges in images?

a. Surface color/Appearance discontinuity

b. Illumination discontinuity

c. Surface normal discontinuity

d. All of the above ✔

Your answer is correct.

The correct answer is:
All of the above

Question 5
Correct
Mark 1.00 out of 1.00

Which of the following statements are true?

A) Classification and Regression are supervised learning techniques.

Question 5
Correct
Mark 1.00 out of 1.00
Flag question

Which of the following statements are true?

A) Classification and Regression are supervised learning techniques.

B) Clustering and Density Estimation are unsupervised learning techniques.

C) Supervised learning is learn input and output map.

D) Unsupervised learning is discover pattern in the input data.

E) Reinforcement learning describes a class of problems where an agent operates in an environment and must learn to operate using feedback.

a. A, B, C, D and E ✔

b. A only

c. A and B only

d. A, B, and C only

Your answer is correct.
The correct answer is:

A, B, C, D and E

Question 6

What is the formula for FPR (false positive rate)

d. A, B, and C only

Your answer is correct.
The correct answer is:

A, B, C, D and E

Question 6
Correct
Mark 1.00 out of 1.00
Flag question

What is the formula for FPR (false positive rate)

a. FP/(TP+FN)
b. FP/(FP+TN) ✔
c. TP/(TP+FN)

Your answer is correct.
The correct answer is:
FP/(FP+TN)

Question 7
Correct
Mark 1.00 out of

The histogram contains 9 bins corresponding to angles 0,20,40,60,80,100,120,140,160.
Given gradient's magnitude and direction (in degree) matrices as

The correct answer is:
FP/(FP+TN)

Question 7
Correct
Mark 1.00 out of 1.00
Flag question

The histogram contains 9 bins corresponding to angles 0,20,40,60,80,100,120,140,160.

Given gradient's magnitude and direction (in degree) matrices as $\begin{bmatrix} 2 & 3 \\ 4 & 7 \end{bmatrix}$ and $\begin{bmatrix} 80 & 60 \\ 60 & 0 \end{bmatrix}$,respectively. Select the appropriate vector representing histogra

a. (6,0,1,5,0,3,2,0,0)

b. (7,0,0,7,2,0,0,0,0) ✓

c. (5,1,4,7,0,9,2,3,0)

d. (9,0,1,4,5,6,3,2,1)

Your answer is correct.
The correct answer is:
(7,0,0,7,2,0,0,0,0)

Your answer is correct.

The correct answer is:

(7,0,0,7,2,0,0,0,0)

Question 8

Correct

Mark 1.00 out of 1.00

Flag question

Which of the following is false regarding detectors and descriptors?

a. A descriptor describes an image patch around an interest point. It could be as simple as the raw pixel values, or it could b such as Histogram of gradient orientations

b. Harris corner detector is an interest point detector which is rotation and scale invariant ✔

c. SIFT includes both a detector and descriptor which is based of DoG(Difference of Gaussians)

d. an interest point is typically a local maximum of some function, such as a "cornerness" metric

Your answer is correct.

The correct answer is:

Harris corner detector is an interest point detector which is rotation and scale invariant

Your answer is correct.

The correct answer is:
Harris corner detector is an interest point detector which is rotation and scale invariant

Question 9
Correct
Mark 1.00 out of 1.00
Flag question

Which of the following statement is/are false?

a. None of these ✔

b. At corners the USAN area is smaller than half the template area.

c. In flat regions the USAN has similar area to the template.

d. At edges the USAN area is about half the template area.

Your answer is correct.

The correct answer is:
None of these

Question 10
Consider the following image:

None of these

Question **10**
Correct
Mark 5.00 out of 5.00
Flag question

Consider the following image:

I

0	0	1	4	9
1	0	5	7	11
1	4	9	12	16
3	8	11	14	16
8	10	15	16	20

d/dx

-1	0	1

d/dy

-1
0
1

Compute the Harris matrix

$$H = \sum_{(x,y)\in W} \begin{bmatrix} I_x(x,y)^2 & I_x(x,y)I_y(x,y) \\ I_x(x,y)I_y(x,y) & I_y(x,y)^2 \end{bmatrix}$$

for the 3 by 3 highlighted window. In the above formula $I_x = dI/dx$, $I_y = dI/dy$, and W is the window highlighted in the image.

a. [431 395
385 381]

b. [403 403
301 381]

Compute the Harris matrix

$$H = \sum_{(x,y)\in W} \begin{bmatrix} I_x(x,y)^2 & I_x(x,y)I_y(x,y) \\ I_x(x,y)I_y(x,y) & I_y(x,y)^2 \end{bmatrix}$$

for the 3 by 3 highlighted window. In the above formula $I_x = dI/dx$, $I_y = dI/dy$, and W is the window highlighted in the image.

a. [431 395
385 381]

b. [403 403
301 381]

c. [381 430
405 381]

d. [403 385
385 381] ✔

Your answer is correct.

a. [431 395
385 381]

b. [403 403
301 381]

c. [381 430
405 381]

d. [403 385
385 381] ✔

Your answer is correct.

The correct answer is:
[403 385
385 381]

Finish review