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الرؤية الحاسوبية - (606384_1)

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Course management ⚙

خ2   202211341 خالد محمود محمد غنايم_DS&AI

Status	Finished
Started	Wednesday, 21 January 2026, 11:49 AM
Completed	Wednesday, 21 January 2026, 12:40 PM
Duration	51 mins 25 secs
Grade	**37.00** out of 40.00 (**92.5**%)

Question 1

Correct

Mark 1.00 out of 1.00

Which method detects keypoints and computes binary descriptors?

- ○ a. Contours
- ◉ b. ORB ✅
- ○ c. HOG
- ○ d. Harris

Your answer is correct.

The correct answer is: ORB

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 11:51:25	Saved: ORB	Answer saved
3	**21/01/26, 12:40:51**	**Attempt finished**	**Correct**

Question 2

Correct

Mark 1.00 out of 1.00

Morphological operations are mainly applied to binary images.

○ True ✓

○ False

The correct answer is 'True'.

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 11:51:25	Saved: True	Answer saved
3	**21/01/26, 12:40:51**	**Attempt finished**	**Correct**

Question 3

Correct

Mark 1.00 out of 1.00

Which operation fills small black holes?

○ a. Erosion

○ b. Dilation

○ c. Opening

● d. Closing ✓

Your answer is correct.

The correct answer is: Closing

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 11:51:25	Saved: Closing	Answer saved
3	**21/01/26, 12:40:51**	**Attempt finished**	**Correct**

Which preprocessing step is MOST suitable for data augmentation?

○ a.   Grayscale conversion

○ b.   ROI cropping

○ c.   Histogram equalization

◉ d.   Flipping ⊘

Your answer is correct.

The correct answer is: Flipping

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 11:56:22	Saved: Flipping	Answer saved
3	**21/01/26, 12:40:51**	**Attempt finished**	**Correct**

Which operations help clean noisy binary images?

(Note: this is an MAQ)

- ☑ a. Closing ⊗
- ☐ b. Sharpening
- ☑ c. Erosion ⊘
- ☑ d. Opening ⊘

Your answer is correct.

The correct answers are: Erosion, Opening

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 12:39:54	Saved: Closing ; Erosion ; Opening	Answer saved
3	**21/01/26, 12:40:51**	**Attempt finished**	**Correct**

Question 6

Correct

Mark 1.00 out of 1.00

An image of size 200 × 300 stored as a grayscale image contains how many intensity values?

- ○ a. 300
- ○ b. 200
- ● c. 60,000 ⊘
- ○ d. 180,000

Your answer is correct.

The correct answer is: 60,000

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 11:56:22	Saved: 60,000	Answer saved
3	**21/01/26, 12:40:51**	**Attempt finished**	**Correct**

Question 7

Correct

Mark 1.00 out of 1.00

Which task belongs to the pre-processing stage of Computer Vision?

- ○ a. Face recognition
- ● b. Image thresholding ⊘
- ○ c. Decision-making
- ○ d. Object classification

Your answer is correct.

The correct answer is: Image thresholding

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 11:58:09	Saved: Image thresholding	Answer saved
3	**21/01/26, 12:40:51**	**Attempt finished**	**Correct**

What are the valid environments mentioned for OpenCV development?

(NOTE: This is an MAQ.)

☑ a.   Jupyter Notebook ✓

☐ b.   Android Studio

☑ c.   PyCharm ✓

☑ d.   Google Colab ✓

Your answer is correct.

The correct answers are: Jupyter Notebook, PyCharm, Google Colab

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 11:58:09	Saved: Jupyter Notebook ; PyCharm ; Google Colab	Answer saved
3	**21/01/26, 12:40:51**	**Attempt finished**	**Correct**

Opening is defined as:

- a. Erosion → Dilation ✓
- b. Threshold → Blur
- c. Dilation → Erosion
- d. Blur → Threshold

Your answer is correct.

The correct answer is: Erosion → Dilation

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 11:58:09	Saved: Erosion → Dilation	Answer saved
3	21/01/26, 12:40:51	Attempt finished	Correct

Machine Learning models operate directly on raw pixels in this course.

- True
- False ✓

The correct answer is 'False'.

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 11:59:40	Saved: False	Answer saved
3	21/01/26, 12:40:51	Attempt finished	Correct

Why are features extracted from images?

- ○ a. To enhance color quality
- ● b. To reduce computational complexity ✓
- ○ c. To store images efficiently
- ○ d. To increase image size

Your answer is correct.

The correct answer is: To reduce computational complexity

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 11:59:40	Saved: To reduce computational complexity	Answer saved
3	**21/01/26, 12:40:51**	**Attempt finished**	**Correct**

Why is Canny edge detection preferred?

- ● a. It handles noise well ✓
- ○ b. It works on color images
- ○ c. It produces thick edges
- ○ d. It is fastest

Your answer is correct.

The correct answer is: It handles noise well

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 11:59:40	Saved: It handles noise well	Answer saved
3	**21/01/26, 12:40:51**	**Attempt finished**	**Correct**

Histogram equalization helps to:

(Note: this is an MAQ)

- ☐ a. Remove noise
- ☑ b. Improve contrast ⊘
- ☑ c. Spread pixel intensities ⊘
- ☐ d. Detect edges

Your answer is correct.

The correct answers are: Improve contrast, Spread pixel intensities

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 12:02:04	Saved: Improve contrast ; Spread pixel intensities	Answer saved
3	**21/01/26, 12:40:51**	**Attempt finished**	**Correct**

Question 14

Correct

Mark 1.00 out of 1.00

Histogram equalization is applied to:

- ○ a. Binary images
- ○ b. RGB images directly
- ○ c. Color histograms only
- ● d. Grayscale images ✓

Your answer is correct.

The correct answer is: Grayscale images

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 12:02:04	Saved: Grayscale images	Answer saved
3	**21/01/26, 12:40:51**	**Attempt finished**	**Correct**

Question 15

Correct

Mark 1.00 out of 1.00

Which filter assigns the average of neighboring pixels?

- ○ a. Median Blur
- ● b. Averaging Blur ✓
- ○ c. Sharpening
- ○ d. Gaussian Blur

Your answer is correct.

The correct answer is: Averaging Blur

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 12:02:04	Saved: Averaging Blur	Answer saved
3	**21/01/26, 12:40:51**	**Attempt finished**	**Correct**

Which are shape features?

(Note: this is an MAQ)

☑ a. Aspect ratio ⊘

☑ b. Area ⊘

☑ c. Perimeter ⊘

☐ d. Histogram

Your answer is correct.

The correct answers are: Area, Perimeter, Aspect ratio

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 12:02:18	Saved: Aspect ratio ; Area ; Perimeter	Answer saved
3	**21/01/26, 12:40:51**	**Attempt finished**	**Correct**

Histogram equalization may reduce image contrast if the original image already has a well-distributed range of intensity values

◉ True ⊘

○ False

The correct answer is 'True'.

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 12:25:41	Saved: True	Answer saved
3	**21/01/26, 12:40:51**	**Attempt finished**	**Correct**

Which thresholding method automatically selects the best cutoff value?

- ○ a. Adaptive
- ○ b. Binary
- ○ c. Simple
- ● d. Otsu ⊘

Your answer is correct.

The correct answer is: Otsu

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 12:03:17	Saved: Otsu	Answer saved
3	**21/01/26, 12:40:51**	**Attempt finished**	**Correct**

Which operator detects edges in both directions at once?

- ○ a. Sobel
- ○ b. Canny
- ○ c. Gaussian
- ● d. Laplacian ⊘

Your answer is correct.

The correct answer is: Laplacian

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 12:04:40	Saved: Laplacian	Answer saved
3	**21/01/26, 12:40:51**	**Attempt finished**	**Correct**

Which model is considered a simple baseline classifier?

○ a. CNN

○ b. KNN

◉ c. Logistic Regression ⊗

○ d. SVM

Your answer is incorrect.

The correct answer is: KNN

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 12:04:40	Saved: Logistic Regression	Answer saved
3	**21/01/26, 12:40:51**	**Attempt finished**	**Incorrect**

Corners are considered stable image features.

◉ True ⊘

○ False

The correct answer is 'True'.

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 12:40:23	Saved: True	Answer saved
3	**21/01/26, 12:40:51**	**Attempt finished**	**Correct**

Why do many algorithms prefer grayscale images?

○ a.   They reduce computation cost ✓

○ b.   They increase image resolution

○ c.   They enhance contrast automatically

○ d.   They contain more color information

Your answer is correct.

The correct answer is: They reduce computation cost

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 12:06:13	Saved: They reduce computation cost	Answer saved
3	**21/01/26, 12:40:51**	**Attempt finished**	**Correct**

HOG mainly captures:

○ a.   Edge orientation patterns ✓

○ b.   Pixel intensity values

○ c.   Texture noise

○ d.   Color distribution

Your answer is correct.

The correct answer is: Edge orientation patterns

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 12:28:56	Saved: Edge orientation patterns	Answer saved
3	**21/01/26, 12:40:51**	**Attempt finished**	**Correct**

Question **24**

Correct

Mark 1.00 out of 1.00

Adaptive thresholding uses a single global threshold value.

○ True

◉ False ✓

The correct answer is 'False'.

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 12:06:13	Saved: False	Answer saved
3	**21/01/26, 12:40:51**	**Attempt finished**	**Correct**

Question **25**

Correct

Mark 1.00 out of 1.00

A histogram with most values near 0 indicates the image is:

○ a. Bright

◉ b. Dark ✓

○ c. Balanced

○ d. Overexposed

Your answer is correct.

The correct answer is: Dark

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 12:09:55	Saved: Dark	Answer saved
3	**21/01/26, 12:40:51**	**Attempt finished**	**Correct**

Which operations are mainly used for visualization and debugging?

(NOTE: this is a MAQ)

- ☑ a.   Drawing rectangles ⊘
- ☐ b.   Thresholding
- ☐ c.   Saving images
- ☑ d.   Adding text ⊘

Your answer is correct.

The correct answers are: Drawing rectangles, Adding text

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 12:09:55	Saved: Drawing rectangles ; Adding text	Answer saved
3	**21/01/26, 12:40:51**	**Attempt finished**	**Correct**

Resizing an image to a very large size may cause loss of details.

- ○ True
- ◉ False ⊘

The correct answer is 'False'.

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 12:09:55	Saved: False	Answer saved
3	**21/01/26, 12:40:51**	**Attempt finished**	**Correct**

Thresholding converts a grayscale image into:

- ○ a. Binary image ⊘
- ○ b. Edge image
- ○ c. Double image
- ○ d. Color image

Your answer is correct.

The correct answer is: Binary image

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 12:12:17	Saved: Binary image	Answer saved
3	**21/01/26, 12:40:51**	**Attempt finished**	**Correct**

Which smoothing filter best removes salt-and-pepper noise?

- ○ a. Median ⊘
- ○ b. Laplacian
- ○ c. Averaging
- ○ d. Gaussian

Your answer is correct.

The correct answer is: Median

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 12:12:17	Saved: Median	Answer saved
3	**21/01/26, 12:40:51**	**Attempt finished**	**Correct**

Why is Python commonly used with OpenCV?

○ a. It produces faster compiled code

○ b. It requires no memory management

● c. It integrates well with NumPy arrays ✓

○ d. It replaces C++ implementations

Your answer is correct.

The correct answer is: It integrates well with NumPy arrays

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 12:12:17	Saved: It integrates well with NumPy arrays	Answer saved
3	**21/01/26, 12:40:51**	**Attempt finished**	**Correct**

Which OpenCV feature makes it suitable for real-time applications?

○ a. Built-in datasets

○ b. GUI support

○ c. Cloud integration

● d. Optimized algorithms ✓

Your answer is correct.

The correct answer is: Optimized algorithms

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 12:33:34	Saved: Optimized algorithms	Answer saved
3	**21/01/26, 12:40:51**	**Attempt finished**	**Correct**

Sobel operator computes intensity changes separately along X and Y directions.

○ True ⊗

○ False

The correct answer is 'False'.

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 12:14:25	Saved: True	Answer saved
3	**21/01/26, 12:40:51**	**Attempt finished**	**Incorrect**

Brightness adjustment changes pixel intensity uniformly across the image.

○ True ⊘

○ False

The correct answer is 'True'.

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 12:34:21	Saved: True	Answer saved
3	**21/01/26, 12:40:51**	**Attempt finished**	**Correct**

A binary image always occupies less memory than a grayscale image.

○ True

◉ False ⊘

The correct answer is 'False'.

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 12:40:36	Saved: False	Answer saved
3	**21/01/26, 12:40:51**	**Attempt finished**	**Correct**

Sharpening filters reduce noise in images.

○ True

◉ False ⊘

The correct answer is 'False'.

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 12:16:13	Saved: False	Answer saved
3	**21/01/26, 12:40:51**	**Attempt finished**	**Correct**

Which image representation stores values in the range [0, 1] by convention?

○ a. Double image ⊘

○ b. Binary image

○ c. RGB color image

○ d. uint8 grayscale image

Your answer is correct.

The correct answer is: Double image

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 12:16:13	Saved: Double image	Answer saved
3	**21/01/26, 12:40:51**	**Attempt finished**	**Correct**

In `cv2.resize(img, (200,200))`, the values represent:

○ a. Rows then columns

○ b. Width then height

○ c. Scale factors

◉ d. Height then width ⊗

Your answer is incorrect.

The correct answer is: Width then height

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 12:18:19	Saved: Height then width	Answer saved
3	**21/01/26, 12:40:51**	**Attempt finished**	**Incorrect**

Google Colab requires manual installation of OpenCV before use.

○ True

◉ False ⊘

The correct answer is 'False'.

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 12:35:34	Saved: False	Answer saved
3	**21/01/26, 12:40:51**	**Attempt finished**	**Correct**

Which operation shrinks white regions?

○ a. Dilation

○ b. Opening

○ c. Closing

◉ d. Erosion ⊘

Your answer is correct.

The correct answer is: Erosion

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 12:18:19	Saved: Erosion	Answer saved
3	**21/01/26, 12:40:51**	**Attempt finished**	**Correct**

In the CV pipeline, Machine Learning is applied after:

- ○ a.   Visualization
- ○ b.   Image saving
- ⦿ c.   Feature extraction ✓
- ○ d.   Image capture

Your answer is correct.

The correct answer is: Feature extraction

Response history

Step	Time	Action	State
1	21/01/26, 11:49:26	Started	Not yet answered
2	21/01/26, 12:18:38	Saved: Feature extraction	Answer saved
3	**21/01/26, 12:40:51**	**Attempt finished**	**Correct**

◄ Announcements

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