Day-19 Quiz-DataScience-Training

Welcome to the Python Programming Quiz! This quiz tests your knowledge of daily learnings. Please read the instructions carefully before starting the quiz.

Instructions and Rules

- **Time Limit:** You have 20 minutes to complete the quiz.
- **Number of Questions:** The quiz consists of 20 multiple-choice questions.
- **Scoring:** Each correct answer is worth 1 point. There is no negative marking for incorrect answers.
- **Single Attempt:** You are allowed only one attempt to complete the quiz.
- **Required Fields:** All questions are mandatory. You must answer each question to submit the quiz.
- **Resources:** This is a closed-book quiz. Do not use any external resources, including books, notes, or the internet.
- **Honesty:** Please answer the questions honestly and to the best of your ability. Cheating or dishonesty will result in disqualification.
- **Environment:** Ensure you are in a quiet environment where you can concentrate without interruptions.
- **Technical Issues:** In case of technical issues, please contact the quiz administrator immediately.
- **Retakes:** There are no retake opportunities for this quiz. Ensure you are prepared before starting.

Good luck, and do your best!

* Indicates required question

1. Email *

2. **1. What is the primary purpose of OpenCV?** *

Mark only one oval.

- A) Text processing
- B) Image and video processing
- C) Database management
- D) Network communication

3. **2. How do you read an image using OpenCV?** *

Mark only one oval.

- A) cv2.loadImage()
- B) cv2.read()
- C) cv2.imread()
- D) cv2.open()

4. **3. What does the function cv2.imshow() do in OpenCV?** *

Mark only one oval.

- A) It loads an image
- B) It displays an image
- C) It saves an image
- D) It processes an image

5. **4. What does cv2.waitKey(0) do in OpenCV?** *

Mark only one oval.

- A) Waits for a key event indefinitely
- B) Closes the image window
- C) Reads the next frame of a video
- D) Converts an image to grayscale

6. **5. How do you draw a line on an image using OpenCV?** *

Mark only one oval.

- A) cv2.line(image, start_point, end_point, color, thickness)
- B) cv2.drawLine(image, start_point, end_point, color, thickness)
- C) cv2.plotLine(image, start_point, end_point, color, thickness)
- D) cv2.paintLine(image, start_point, end_point, color, thickness)

7. **6. Which function is used to draw a rectangle in OpenCV?** *

Mark only one oval.

- A) cv2.rectangle(image, start_point, end_point, color, thickness)
- B) cv2.drawRect(image, start_point, end_point, color, thickness)
- C) cv2.plotRect(image, start_point, end_point, color, thickness)
- D) cv2.paintRect(image, start_point, end_point, color, thickness)

8. **7. How can you draw a circle on an image in OpenCV?** *

Mark only one oval.

- A) cv2.circle(image, center, radius, color, thickness)
- B) cv2.drawCircle(image, center, radius, color, thickness)
- C) cv2.plotCircle(image, center, radius, color, thickness)
- D) cv2.paintCircle(image, center, radius, color, thickness)

9. **8. How do you put text on an image in OpenCV?** *

Mark only one oval.

- A) cv2.text(image, text, org, font, scale, color, thickness)
- B) cv2.putText(image, text, org, font, scale, color, thickness)
- C) cv2.drawText(image, text, org, font, scale, color, thickness)
- D) cv2.paintText(image, text, org, font, scale, color, thickness)

10. **9. Which function in OpenCV is used to calculate the histogram of an image?** *

Mark only one oval.

- A) cv2.histogram()
- B) cv2.calcHist()
- C) cv2.calcHistogram()
- D) cv2.hist()

11. **10. What does a histogram represent in an image?** *

Mark only one oval.

- A) The distribution of colors
- B) The distribution of pixel intensities
- C) The distribution of edges
- D) The distribution of shapes

12. **11. What does spatial resolution refer to in the context of images?** *

Mark only one oval.

- A) The number of pixels
- B) The color depth
- C) The file size
- D) The image format

13. **12. What does gray level resolution refer to?** *

Mark only one oval.

- A) The number of different shades of gray that can be represented
- B) The number of pixels in the image
- C) The image format
- D) The file size

14. **13. What is the purpose of convolution in image processing?** *

Mark only one oval.

- A) To apply filters to an image
- B) To change the color space of an image
- C) To resize an image
- D) To convert an image to grayscale

15. **14. What is the purpose of smoothing (blurring) an image?** *

Mark only one oval.

- A) To reduce noise
- B) To enhance edges
- C) To change the color space
- D) To increase brightness

16. **15. Which function is used to convert an image from one color space to another in OpenCV?** *

Mark only one oval.

- A) cv2.changeColor()
- B) cv2.convertColor()
- C) cv2.colorConvert()
- D) cv2.cvtColor()

17. **16. What is the purpose of thresholding in image processing?** *

Mark only one oval.

- A) To convert a grayscale image to a binary image
- B) To smooth an image
- C) To sharpen an image
- D) To resize an image

18. **17. What does the Sobel operator detect in an image?** *

Mark only one oval.

- A) Colors
- B) Edges
- C) Shapes
- D) Textures

19. **18. What are key-points in the context of image features?** *

Mark only one oval.

- A) Important points in an image
- B) Color values in an image
- C) Shapes in an image
- D) Textures in an image

20. **19. How do you capture a video stream from a webcam using OpenCV?** *

Mark only one oval.

- A) cv2.VideoCapture(0)
- B) cv2.openVideo(0)
- C) cv2.startVideo(0)
- D) cv2.captureVideo(0)

21. **20. How do you display video frames in real-time using OpenCV?** *

Mark only one oval.

- A) cv2.show()
- B) cv2.display()
- C) cv2.imshow()
- D) cv2.view()