

0 Name the filters.

Name the filters.

1 Name the filters.

Name the filters.

2 Name the filters.

Name the filters.

3 Which components of the gradient do these correlational filter masks compute?

Which components of the gradient do these correlational filter masks compute?

4 How many steps does the Canny edge detector have?

How many steps does the Canny edge detector have?

5 The last (6th) step in Canny edge detection is...

The last (6th) step in Canny edge detection is...

6 The second to last (5th) step in Canny edge detection is...

The second to last (5th) step in Canny edge detection is...

7 The fourth step in Canny edge detection is...

The fourth step in Canny edge detection is...

8 The third step in Canny edge detection is...

The third step in Canny edge detection is...

9 The second step in Canny edge detection is...

The second step in Canny edge detection is...

10 The first step in Canny edge detection is...

The first step in Canny edge detection is...

11 What noise removal technique should we use when applying Canny edge detection? (first step)

What noise removal technique should we use when applying Canny edge detection? (first step)

12 Based on the previous question, what filter or filters could we use in the first step?

Based on the previous question, what filter or filters could we use in the first step?

13 Apply the Gaussian filter in the figure to the highlighted pixel. [RESULTS IN NEXT QUESTION]

Apply the Gaussian filter in the figure to the highlighted pixel. [RESULTS IN NEXT QUESTION]

14 [RESULT]

[RESULT]

15 Apply the Gaussian filter in the figure to the highlighted pixel. [RESULTS IN NEXT QUESTION]

Apply the Gaussian filter in the figure to the highlighted pixel. [RESULTS IN NEXT QUESTION]

16 [RESULT]

[RESULT]

17 Assume that you have computed the gradients of an image and used them to calculate the gradient orientation and its magnitude. The results are shown in the image. Perform the non-maxima suppression of the Canny edge detector for the horizontal direction and select the elements that would be sent to zero in the image. [RESULTS IN NEXT QUESTION]

Assume that you have computed the gradients of an image and used them to calculate the gradient orientation and its magnitude. The results are shown in the image. Perform the non-maxima suppression of the Canny edge detector for the horizontal direction and select the elements that would be sent to zero in the image. [RESULTS IN NEXT QUESTION]

18 Assume that you have computed the gradients of an image and used them to calculate the gradient orientation and its magnitude. The results are shown in the image. Perform the non-maxima suppression of the Canny edge detector for the horizontal direction and select the elements that would be sent to zero in the image. [RESULTS IN NEXT QUESTION]

Assume that you have computed the gradients of an image and used them to calculate the gradient orientation and its magnitude. The results are shown in the image. Perform the non-maxima suppression of the Canny edge detector for the horizontal direction and select the elements that would be sent to zero in the image. [RESULTS IN NEXT QUESTION]

19 RESULTS

RESULTS

20 On paper, perform double thresholding with threshold values of 20 and 34. Provide your answers on Vevox for the high threshold only.

On paper, perform double thresholding with threshold values of 20 and 34. Provide your answers on Vevox for the high threshold only.

21 RESULTS

RESULTS

22 Perform ONE hysteresis step.

Perform ONE hysteresis step.

23 RESULTS

RESULTS

24 Perform a SECOND hysteresis step.

Perform a SECOND hysteresis step.

25 RESULTS

RESULTS

26 Do we need to run a third hysteresis step?

Do we need to run a third hysteresis step?

27 RESULTS

RESULTS