

Iniciado em sábado, 2 jul 2022, 18:35

Estado Finalizada

Concluída em sábado, 2 jul 2022, 18:42

**Tempo
empregado** 7 minutos 6 segundos

Avaliar 10,00 de um máximo de 10,00(100%)

Questão 1

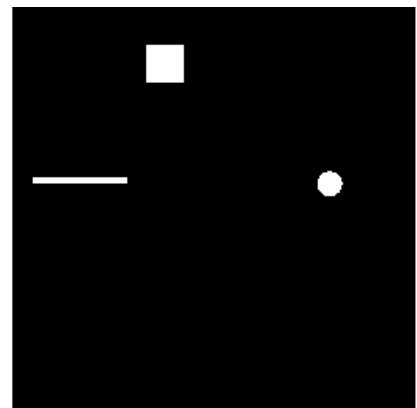
Correto

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Let the first image on the left-hand side be an input image. The images (A) and (B) are result of a segmentation procedure. Match the images with the segmentation method that generated it.



(A)



(B)

B	Threshold-based segmentation	✓
A	Region growing from a single seed	✓

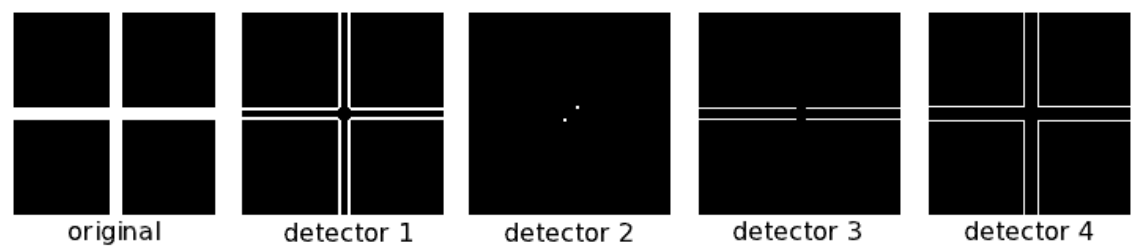
Questão **2**

Correto

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Consider the original image and 4 different edge-detection filters.

Match the image with the correct detector



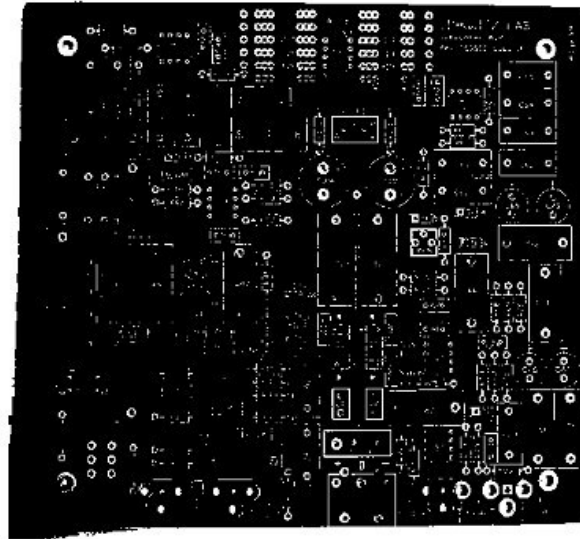
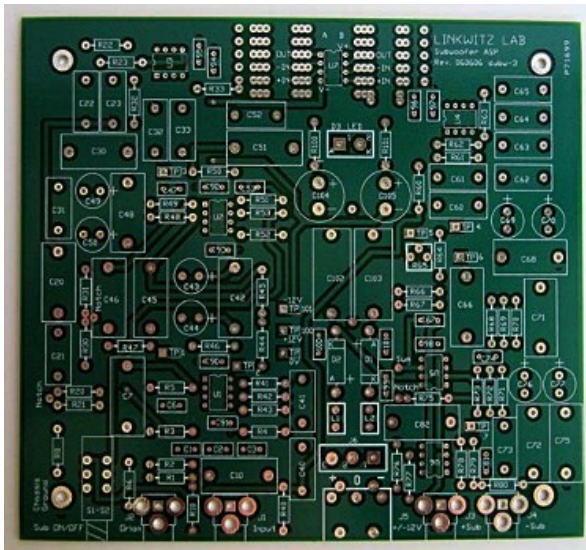
detector 1	<div>Laplacian of Gaussian</div> <div>✓</div>
detector 3	<div>Sobel horizontal</div> <div>✓</div>
detector 2	<div>Sobel diagonal</div> <div>✓</div>
detector 4	<div>Laplacian</div> <div>✓</div>

Questão 3

Correto

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Consider the input image in RGB and an attempt to segment the circuits of the board on the right-hand side. What can be considered in this case to improve the results?



- ☒ a. Pre-process the image so that to correct the uneven illumination, and use an adequate threshold value. ✓
- ☐ b. Use a Laplacian of Gaussian method to smooth out the final result
- ☐ c. Use the Hough transform to match the desired shapes
- ☐ d. Define multiple random seeds and use a Watershed segmentation

Questão 4

Correto

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Depending on the segmentation objective, different methods may be used.

If the objective is to find multiple occurrences of a fixed shape that can be modelled using a mathematical formula then the

Hough transform

✓ is more adequate.

If there is no fixed shape and we want to find similar regions at specific parts of the image, it is possible to define seeds and use the

Watershed method

✓ .

If the desired regions to be segmented are related to the intensity levels, one group are dark and the other group are bright pixels, than

Threshold-based approach

✓ is a good choice.

Edge-based segmentation

◀ [\[interactive video 9-6\] Watershed implementation in Python and Distance Transform](#)

Seguir para...

