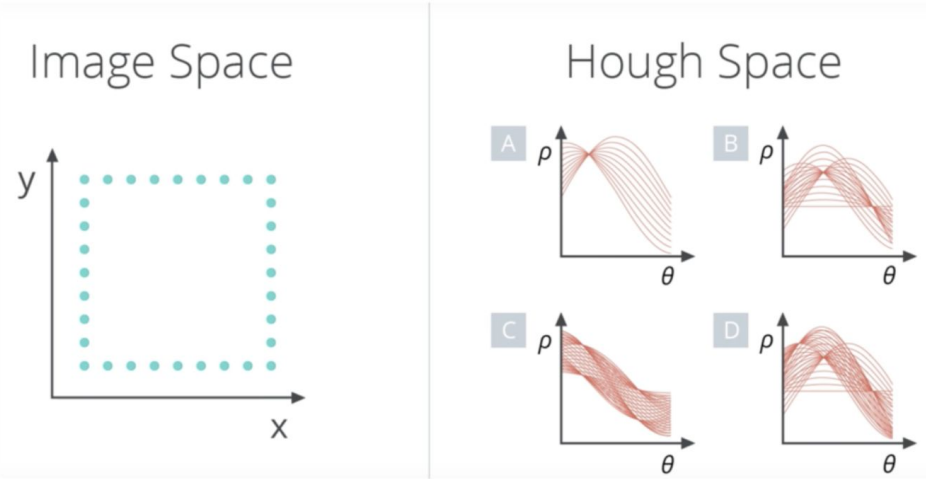
What will this image look like in Hough space? Choose the correct plot.



Click to write the which

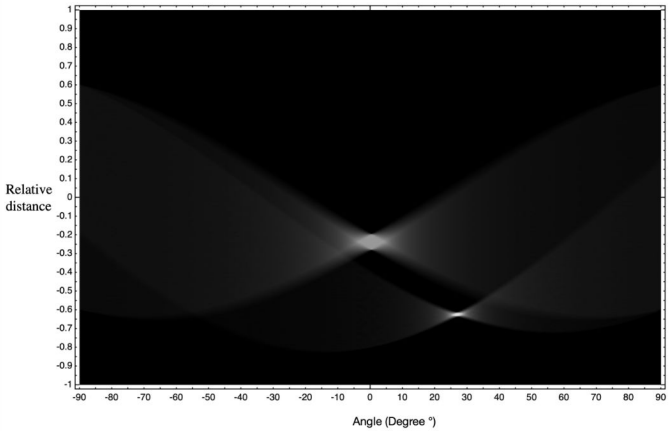
- A)
- B)
- C)
- D)
- E) I dont' know

What is a common issue faced when using the Hough Transform for shape detection in images?

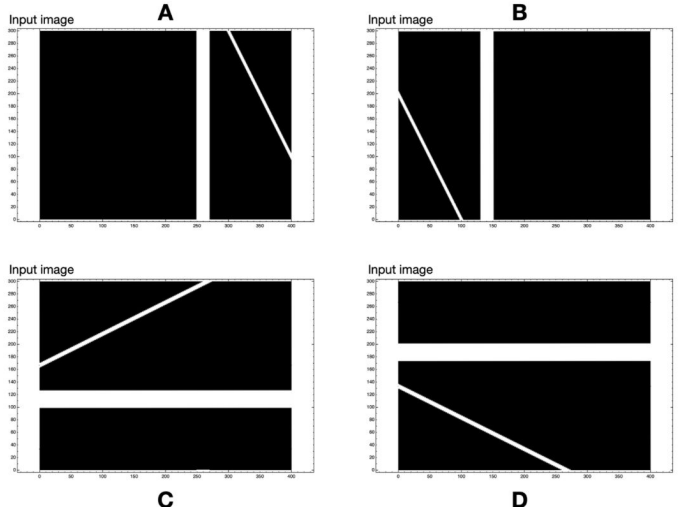
- A) Overfitting to specific shapes
- B) High computational cost compared to edge detection
- C) Inability to detect colors to comparison to black and white
- D) Loss of image quality during the transform processing
- E) I don't know

What happens when you increase the `r_dim` and `theta_dim` in the Hough space matrix?

- ○ A) The computational time decreases but the accuracy increases.
- ○ B) The computational time increases and the resolution of detected lines improves.
- ○ C) The image size increases proportionally.
- ○ D) It decreases the sensitivity to lines in the original image.
- ○ E) I don't know



Which one corresponds to the sketch?



Why was it necessary to shift and scale the computed ρ $(=r)$ values before indexing into the Hough accumulator array (with $\theta \in [0,\pi)$?

- A) To normalize by image size for scale invariance.
- B) To increase the numerical accuracy of the accumulator.
- C) To map ρ into non-negative values for the array indices
- D) To convert ρ to $[0,1]$
- E) I don't know

Suppose you are using a Hough transform to do line fitting, but we notice that **our system is detecting 2 lines** where **there is actually 1** line in the image. Which of the following is most likely to alleviate this problem?

- A) Increase the size of the bins in the Hough transform .
- B) Decrease the size of the bins in the Hough transform.
- C) Sharpen the image.
- D) Make the image larger (e.g., through interpolation).
- E) I don't know