COMPUTER VISION
#MP5
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Description: Implementation of Hough transform to detect lines in an image.
Algorithm: The hough transform uses a voting process to pick the lines that have the highest chance of being present using the parameter space.
The canny edge detector is used to find the edges and this is the image used in the algorithm. The well defined edges(x,y) are transferred to the parameter space(m,c). The colinear x's and y's are found from the parameter space through points of intersection, which mean candidates are found when there are a high number of votes. These lines are then plotted against the original image.
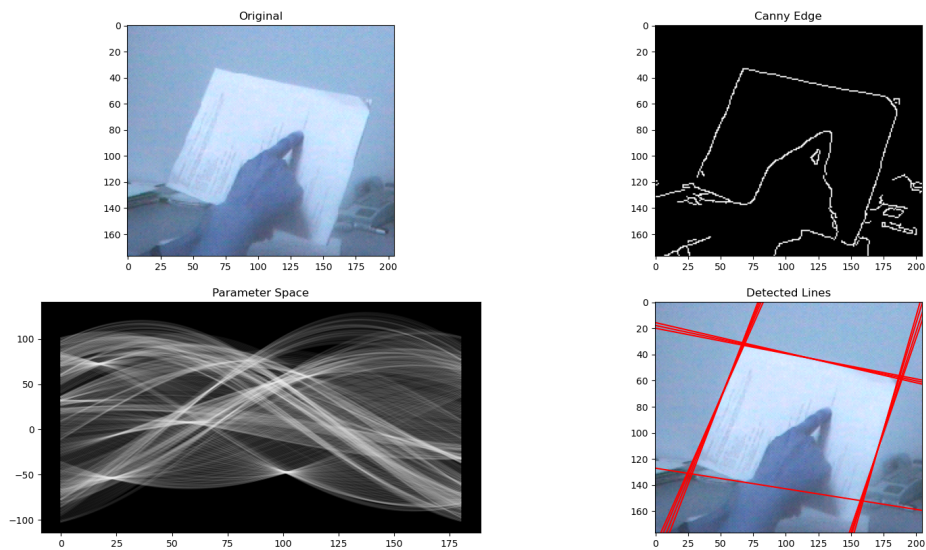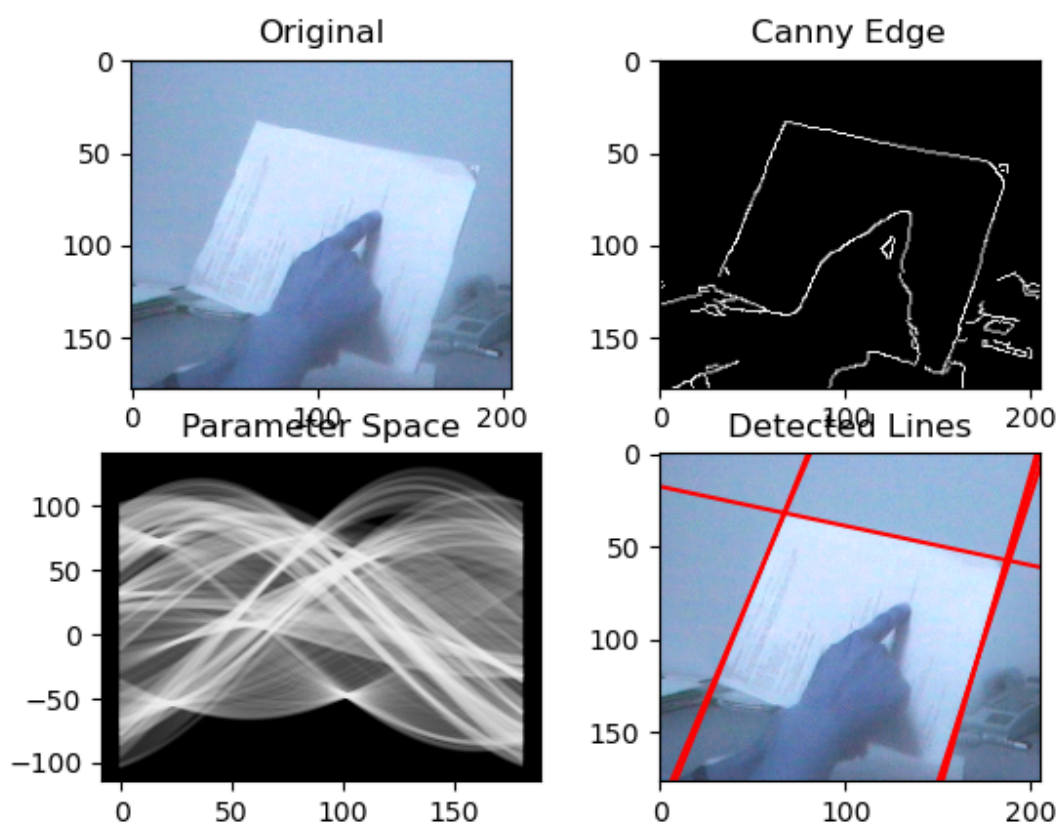
Result Analysis:

Fig Threshold 100
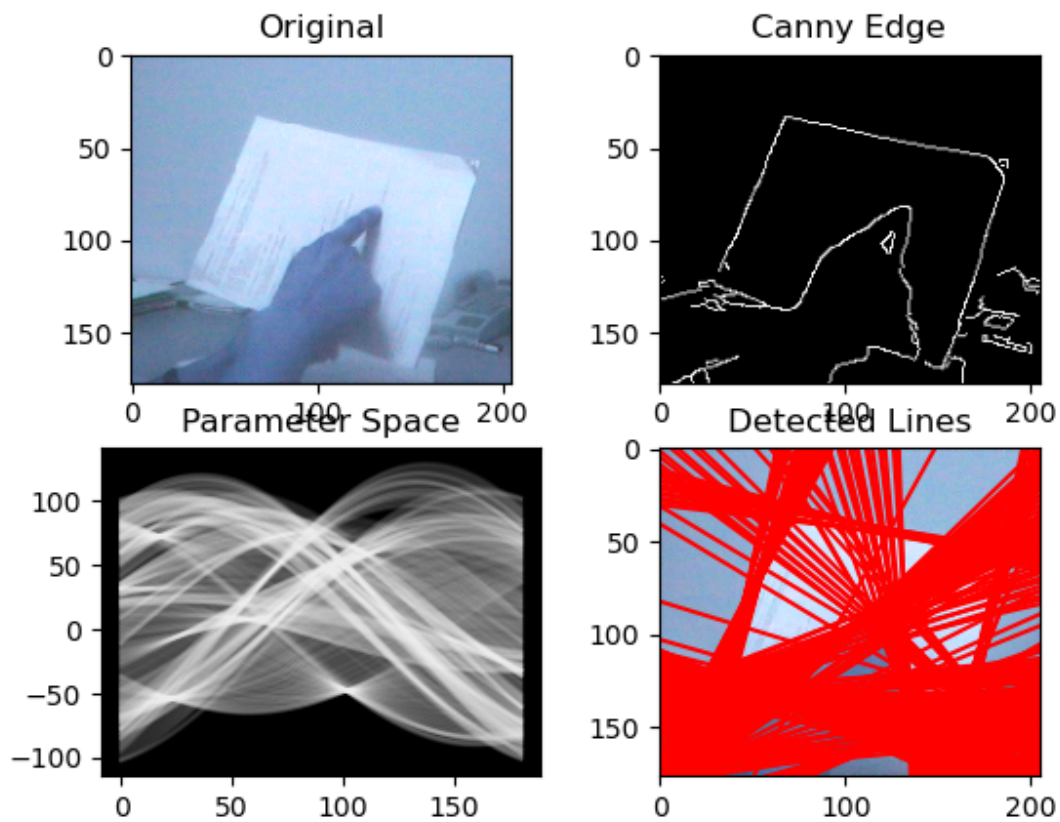
Fig. Threshold is 115

Fig. Threshold is 50

The threshold parameter is the most sensitive parameter, a lower threshold crowds the image with too many lines, while a higher threshold detects few to none, missing major lines present in the image. The threshold of the canny edge detector also makes a big difference since it manipulates the input image with the edges.