this program detect k best lines of an image.

the program detect lines using hough transform and scan lines using bresenham algorithm,

the user can choose T1 and T2 in which every pixel above T2 will determined as a pixel on some line,

every pixel bellow T1 will determined not as a pixel of line, and between T1 and T2 it depends its neighbors (it's neighbors are labeled as pixel on line)

for each line equations (theta,rho) the method scan_line will move sliding window on pixels of the line (size could be changed by user) and return line length and weight

as weight determined by how many pixels actually on the line or how far they are from the line (if the white pixel detected only on the neigbors of the pixel)

each line get his length and weight and the program draw the best rated k lines by their length and weight.

Main methods

- Draw_best_k_lines – gets a input image and all program parameters and returns the image with the best k rated lines drawed
- Scan_line_using_bresenham – gets polar line parameters (rho,theta) and will scan all pixels suppose to be on the line with sliding window, return 2 points to draw the line, line length and line weight
- Sliding_window – gets the edge detection of an image coordinates of a pixel and check this pixel and his neighbors, return weight rated about how far the pixel on edge from original coordinates the method got in input
- Bresenham – return the pixels of a line on the image
- Draw_lines_by_points – draw lines from lines points on the image

follow the program instructions

you can choose which parameteres to enter whereas:

k - number of lines to detect

T1,T2 - lower and upper Threshold

window size - how many neighbors for each side of pixel program should check to find an edge

default parameters:

k=7

T1,T2 = 100,200

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window_size = 2

color = (0,255,0)
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