

Computer vision course

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Lab 4 - Edge and line detection

Task 1

Write a program that loads the image provided (street_scene.png), shows it and evaluates the Canny image. Employ one or more trackbar(s) to control the parameters of the Canny edge detector and check their influence on the resulting image. The Canny image shall be refreshed every time a trackbar is modified.

Task 2

You now need to detect the white markings on the road. How could you tackle this problem? Some suggestions:

- consider edge orientation;
- consider colors close to edge points.

Task 3

Detect white markings using the Hough transform. Check online sources and apply it using the `cv::HoughLines()` function. Suggestion: consider the two strongest lines detected, and select their orientation. Color in red the area between the lines - example below.



Task 4

Detect the road sign using the Hough circular transform - function `cv::HoughCircles()`.