Computational Vision & Imaging - Lab 3

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In this lab exercise, you will look at applying an edge detector and using the built-in matlab hough transform to detect lines.

You are asked to write a short (no more than 2 pages) report of your work, answering specific questions, and showing example images. This work is not assessed (it will not count towards your module mark) but you will get formative feedback.

STEP 1:

- Download the zip file and extract the .m script file and the data files (.jpg) for Lab from CANVAS and save them in your working directory
- Use the matlab script Lab3.m, which has all the steps needed for line detection.

TASK 1:

Work your way through the script file. Using the help function, understand how each function works, from edge detection, Hough Transform and line detection. Write a summary of how this algorithm works, particularly when finding the start/finish of a line.

TASK 2:

- What is the effect of increasing/decreasing the required number of peaks in 'houghpeaks'? This is the second input variable on line 31 of Lab3.m

TASK 3:

- Replace the Canny Edge detector with other algorithms. Which one do you think performs best and why?