RO-1.0X

Assignment 8
Edge Detection

Problem Statement:

- **Given files are**
  - **“assignment_8_1.jpg”, “assignment_8_2.jpg”**

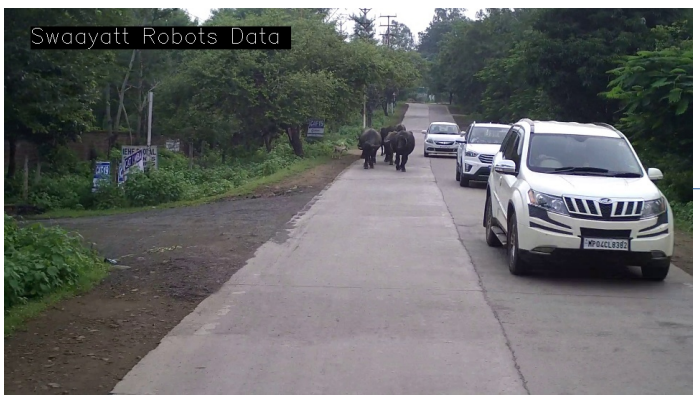
- **Tasks**

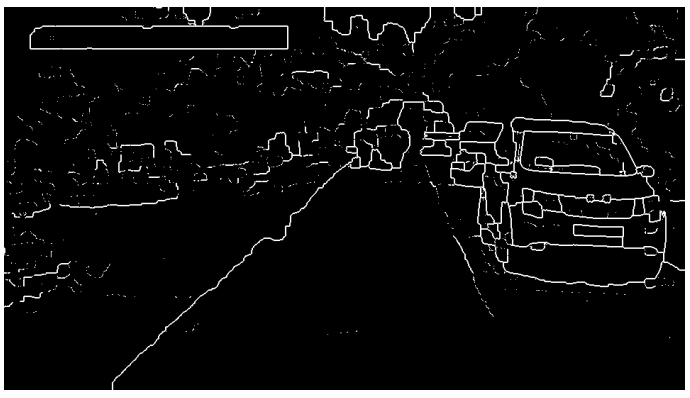
  - As we have seen already from the lectures that before Edge Detection we have to ***smooth*** the image, and it is always the first step in any ***Edge Detection*** method to filter out the *noise* present in the image, so it is very important to choose an appropriate method for ***smoothing,*** each method will give different results , so the task is subdivided in two steps :

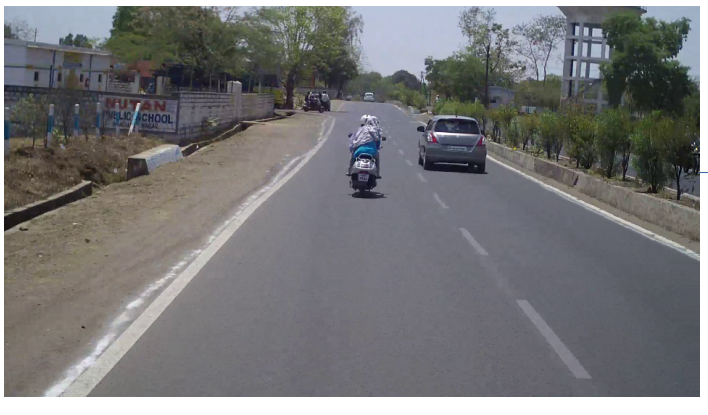
    - *First task is to choose an appropriate **Smoothing method** and also describing the reason*

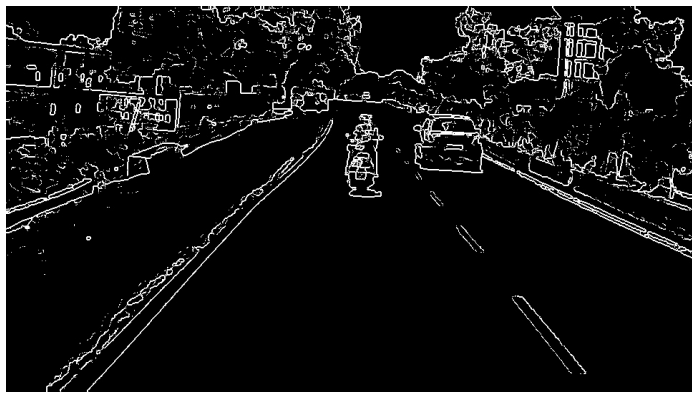
    - *Second task would be **Edge Detection** step for which you can choose any method **excluding Canny** and **LOG [Laplacian of Gaussian]***

    - *here are some examples :*









Note: For Smoothing you can use OpenCV function, but for Edge Detection use your own function*

DeepEigen
RO-1.0X Introduction to Robotics & Visual Navigation
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- **To Submit**
  - **“output.jpg”**
    - *Edge Detection Output*
  - **“edge_detection.py”, “main.py”**
    - *Create a class based implementation in **“edge_detection.py”** and call each operation in **“main.py”***
  - **“explaination.pdf”**
    - *file containing the explaination of each step taken to detect edges in the input image*

    - To submit the assignment put both the files in a folder named **username**, where **username** is your user name with which you signed up at DeepEigen.
      - Submit **username.zip** file