



Electronics Club, IIT Guwahati

Project: Sign Detection

Mentored by: Rahul Aggarwal & Harsh Vardhan Singh

Task - 01

Deadline: 08 November 2021 EOD.

Submission Link: Click [here](#).

Problem:

Write a function that finds edge intensity and orientation in an image.

New_Image = My_Edge_Filter(Original_Image, SIGMA)

A greyscale Original_Image and SIGMA the standard deviation of the Gaussian smoothing kernel (to be used before edge detection) is input. My_Edge_Filter will return New_Image, the edge magnitude image.

Hint: The convolution function can be used to smooth out the image with an appropriate Gaussian kernel. The image gradients in the x-direction and y-direction can be determined using separate Sobel filters (oriented for x and y directions).

Image Link: Click [here](#)

Submission Details:

- Submit the code in a GitHub repo or drive link (This assignment is for your learning so don't just copy functions, try to learn how and why they are working). Also, submit the output image for the given input image which needs to be of the same size as the input image.