

# **DSAA PROJECT**

**“Perform the operation of enhancing the edges of an image. ”**

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**I)**

This project mainly concentrates on enhancing the edges of image. The project uses many different approaches toward Edge detection, Edge Brightening and hence Edge Enhancing.

For Edge Detection we have used many different approaches:

- 1) Sobel
- 2) Prewitt
- 3) Roberts
- 4) log Algorithm
- 5) canny

After detecting the edges we apply same color to the pixels of edges of the edge detected image as they were in the original image and copied image on the original image to get the enhanced image. This approach required a  $n*n*3$  loop which would take a long time for high resolution images. There was a problem in this approach which made us take the other approaches.

**What The project does now is also enhancing of the edges of the images.**

**I)**

- 1) We take a image and we get a filter for the image by laplacian
- 2) Now we have a filter .we will invert this filter and add to this filter a  $3*3$  matrix with a 1 in the middle to get a new filter which we can finally apply to image to get the enhanced image.
- 3) Now we apply “imfilter” on the image with the new filter to get the

image with all the edge enhanced.

## II)

- 1) We take a image and we get a filter for the image using Unsharp.
- 2) Now we apply “imfilter” on the image with the filter to get the image with all the edge enhanced.