E/16/134
Herath H.M.Y.B

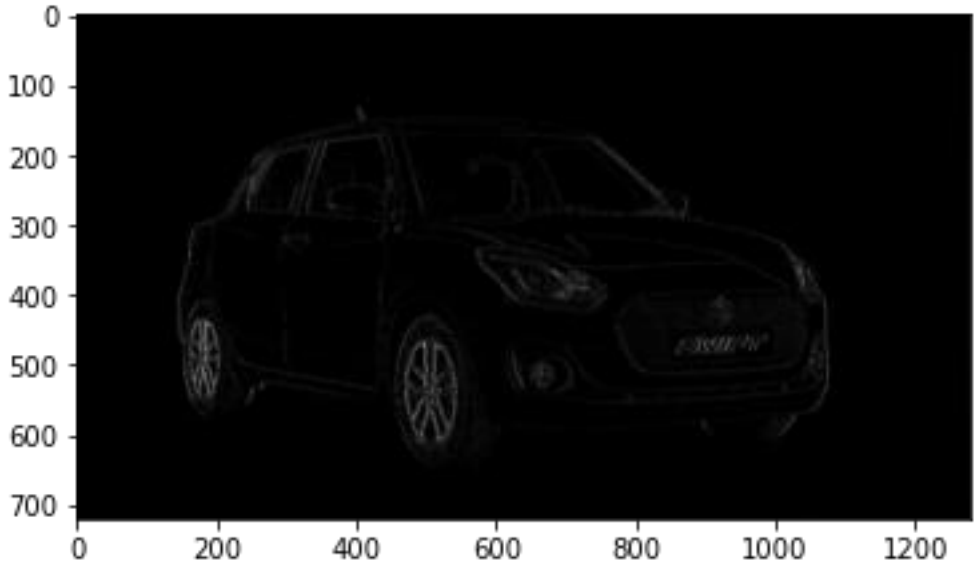
CO543 – Image Processing Lab06

Tasks

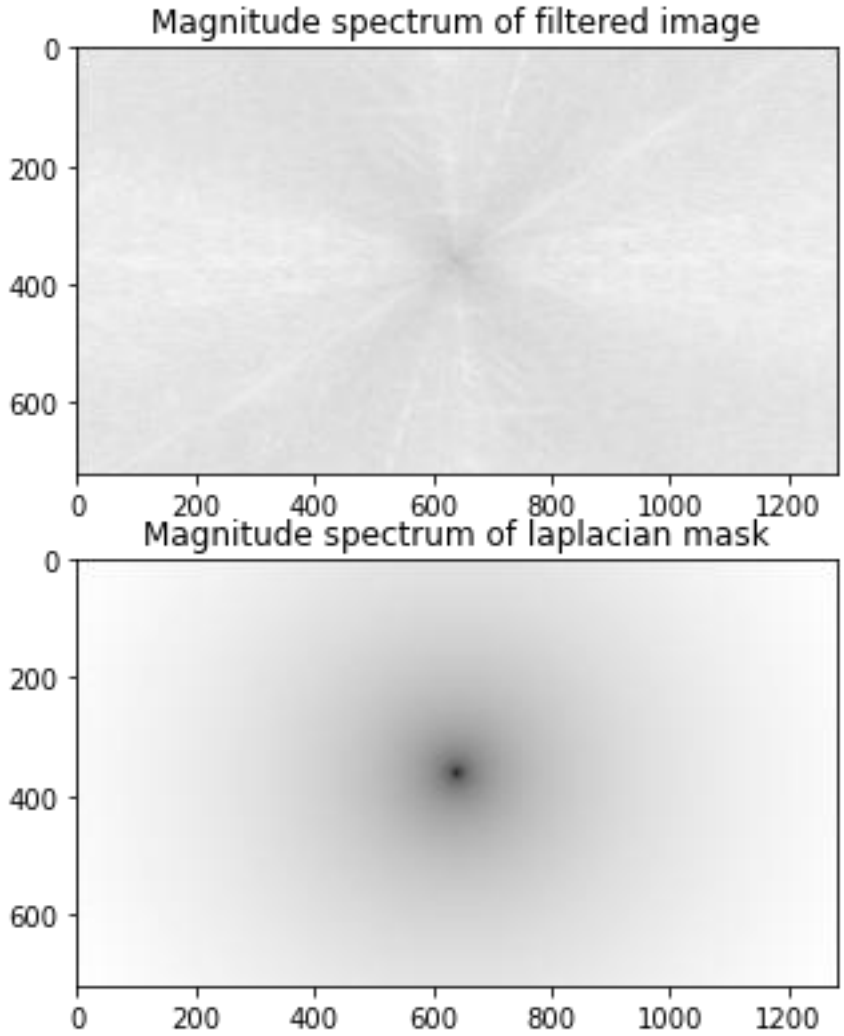
1) Apply high pass laplacian filter on Car.jpg image.

Input image

Output image



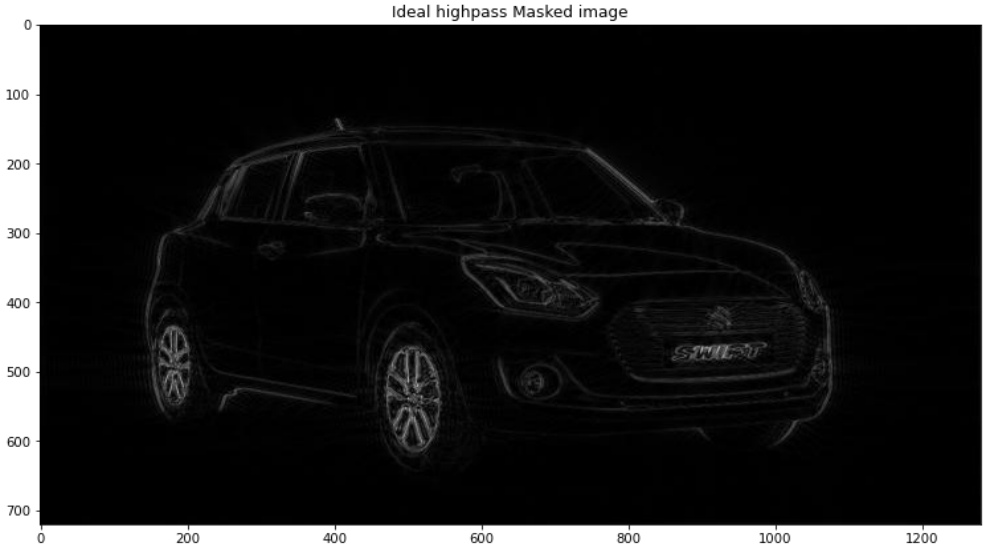
Below shows the spectrum of output image and the spectrum of mask.

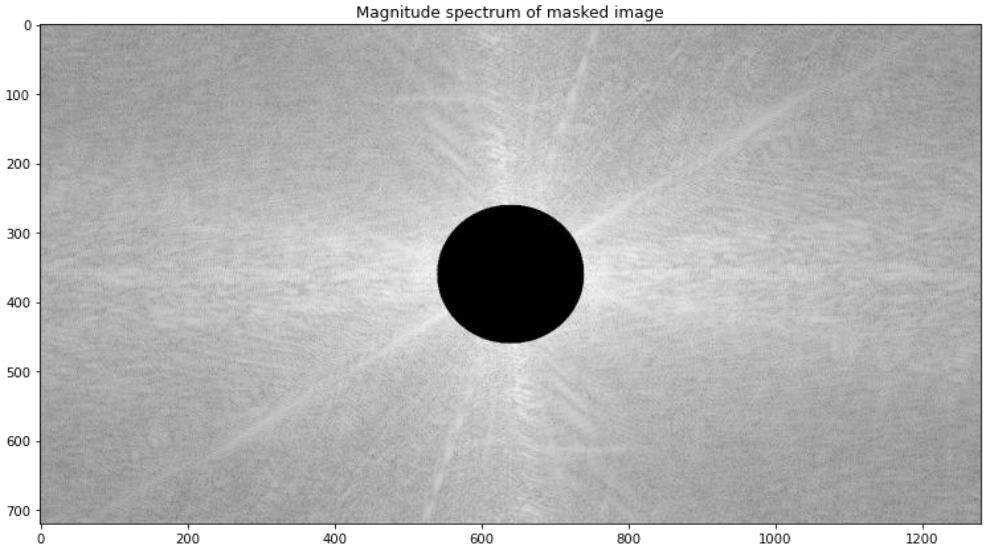


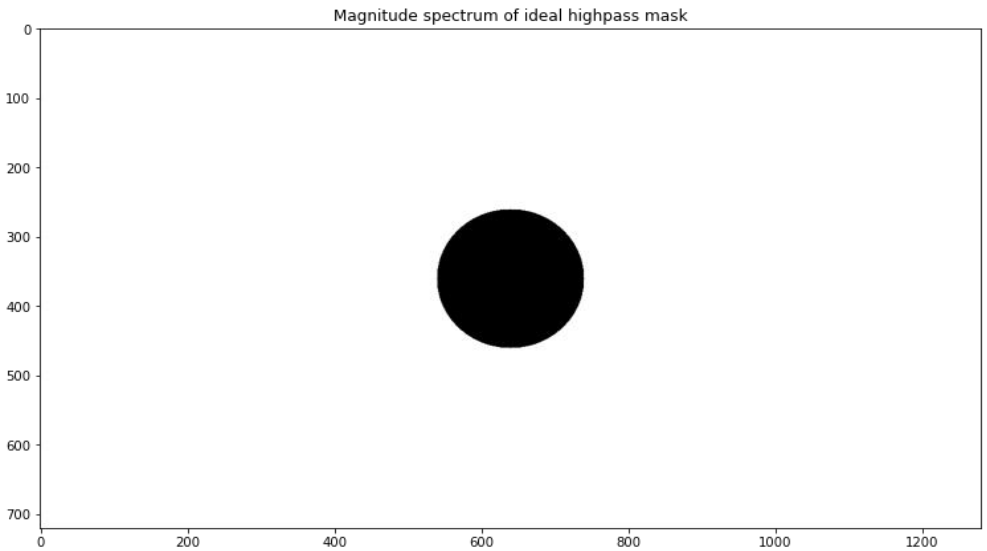
2) Apply ideal high-pass filter on Car.jpg image for D0=100

Input image

Output


Ideal highpass Masked image
0
100
200
300
400
500
600
700
0
200
400
600
800
1000
1200


Magnitude spectrum of masked image
0
100
200
300
400
500
600
700
0
200
400
600
800
1000
1200


Magnitude spectrum of ideal highpass mask
0
100
200
300
400
500
600
700
0
200
400
600
800
1000
1200

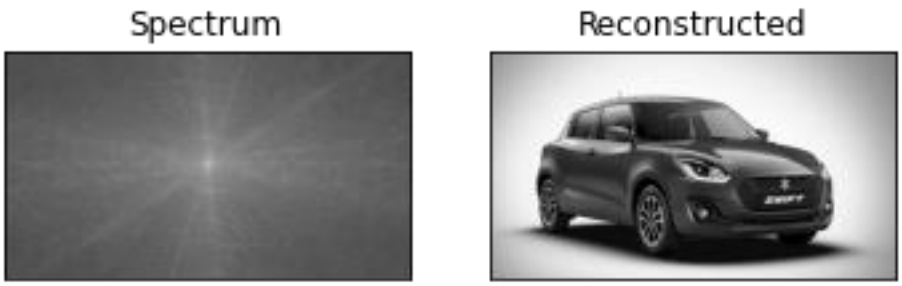
Above first image is output image. Second image is magnitude spectrum of first image. And last image is magnitude spectrum of the mask.

3) Apply FFT2, IFFT2, low-pass Gaussian filter, and high-pass laplacian filter on Car.jpg image.

Input image

- **FFT2, IFFT2**

Output images

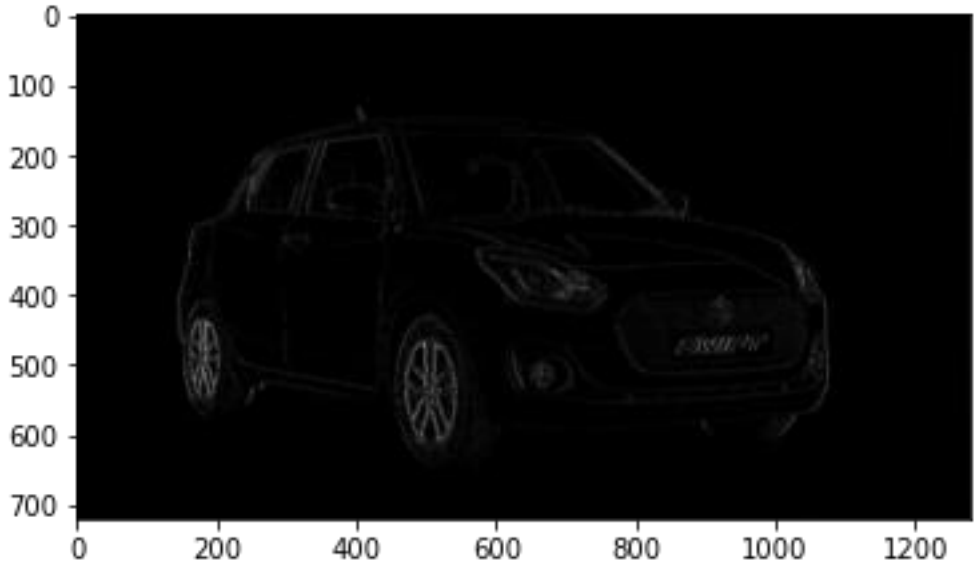


- **low-pass Gaussian filter**

Output image

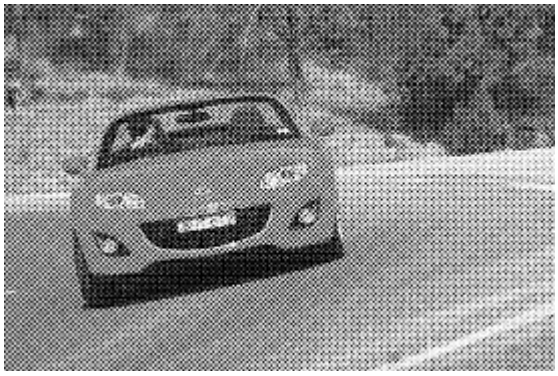
- **high-pass laplacian filter**

Output image



4) Apply the necessary filter and correct the noize in the image. Image file is uploaded.

Input image



Output image using : gaussian_lowpass_filter(img2, 23)