

CSE487

Spring 2020

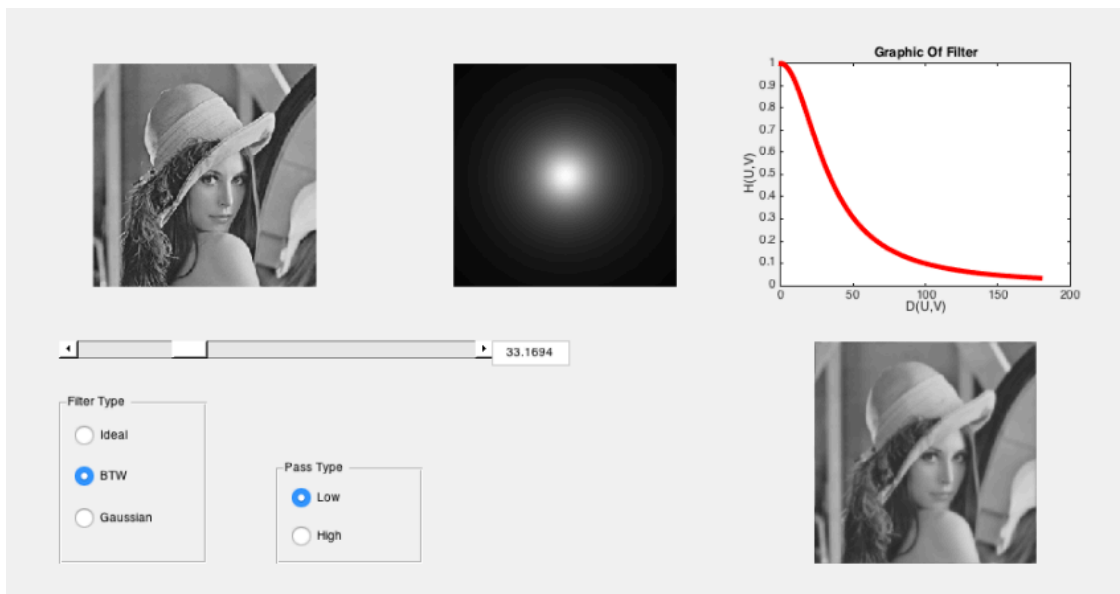
Assignment 2

Filtering in Frequency domain

Due Date: 27.04.2020 23:59

In this assignment you should create an interface in MATLAB that will do the following:

- Load an image (axes1) and display the results (axes4)
- Select between different filters: Ideal, Butterworth and Gauss. Use radio buttons.
- Select between Low Pass Filter and High Pass Filter (LPF or HPF). Use radio buttons.
- Select the diameter of the filter with a slider. Use slider.
- The filter should be displayed in two dimensions (axes2) and in one dimension (with a plot operation (axes3)).



In every change in filter type (LPF or HPF), filter name (Ideal, Butterworth, Gauss) or slider change the images of the filters and the result should be updated immediately!

Only gray images are allowed. If you load a color one transform it to gray.

fft2, fftshift, ifftshift functions or rgb2gray , imshow functions are permitted.

Your GUI **must** be exactly as the attached figure.

A small demo for each of you is required in order to be graded.

The doodle for the demo times will be announced after the deadline.

You should also upload your code in COADSYS.