Faculty of computer science , NUB
CS 312 ,Fall 2021-2022
Mohamed Hesham Aboelgoud

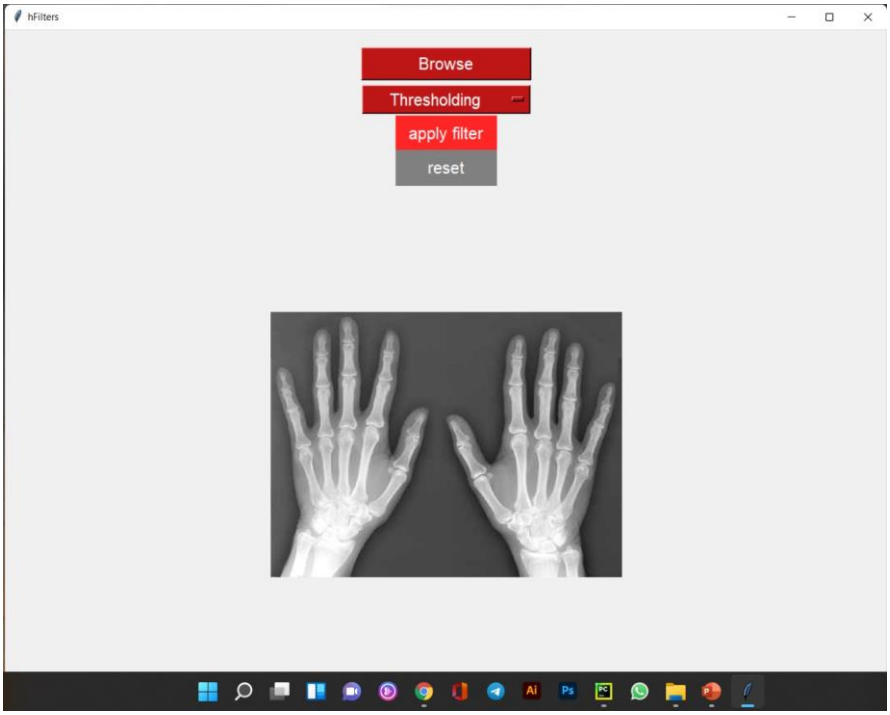
The goal of using filters is to modify or enhance image properties and/or to extract valuable information

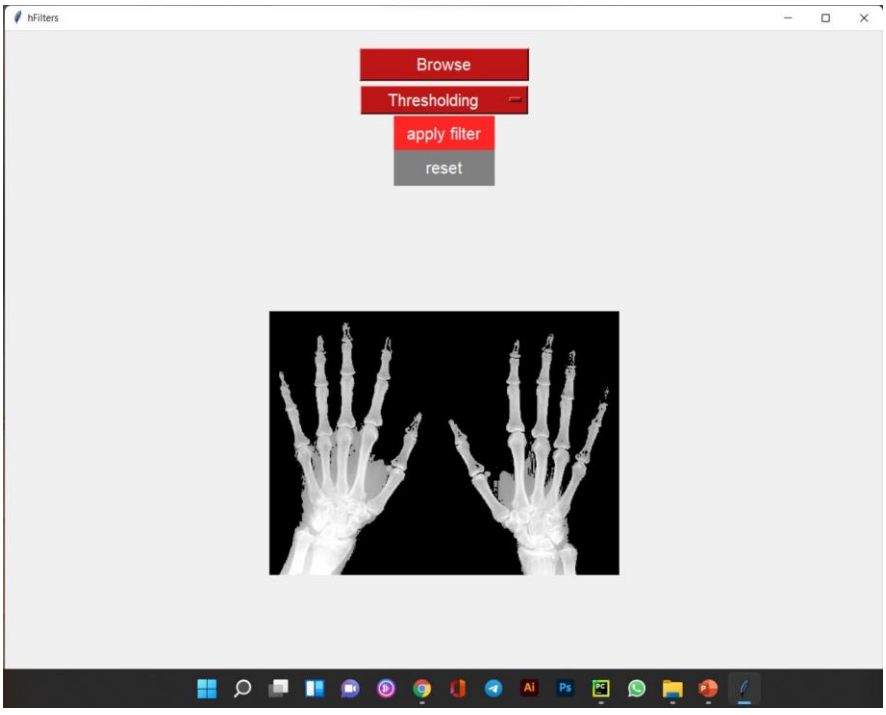
- **Image enhancement can be done through gray level transformations.**

Image processing filters with python

Thresholding

we use thresholding as a way to select areas of interest of an image, while ignoring the parts we are not concerned with



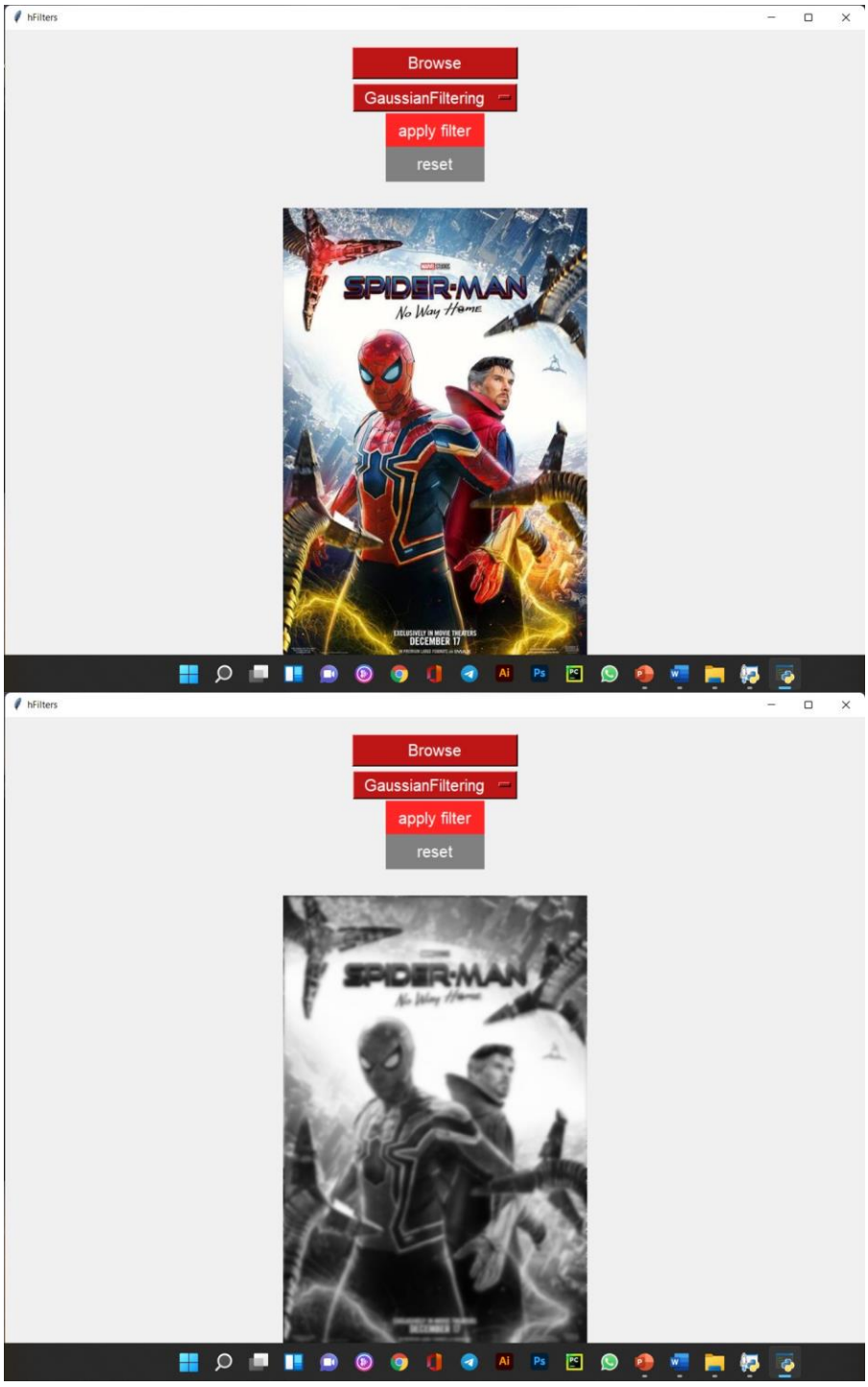


- **Linear filtering**

is the filtering method in which the value of output pixel is linear combinations of the neighbouring input pixels.

Ex : Gaussian filter

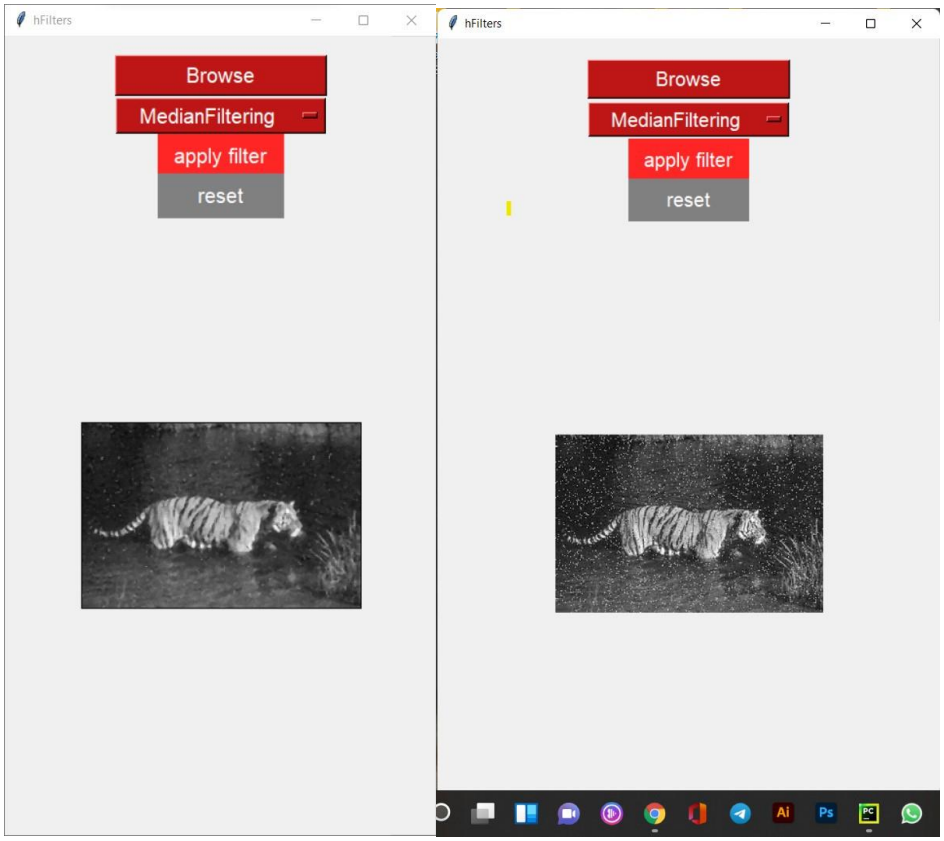
- **Gaussian smoothing operator is used to `blur' images and remove detail and noise**



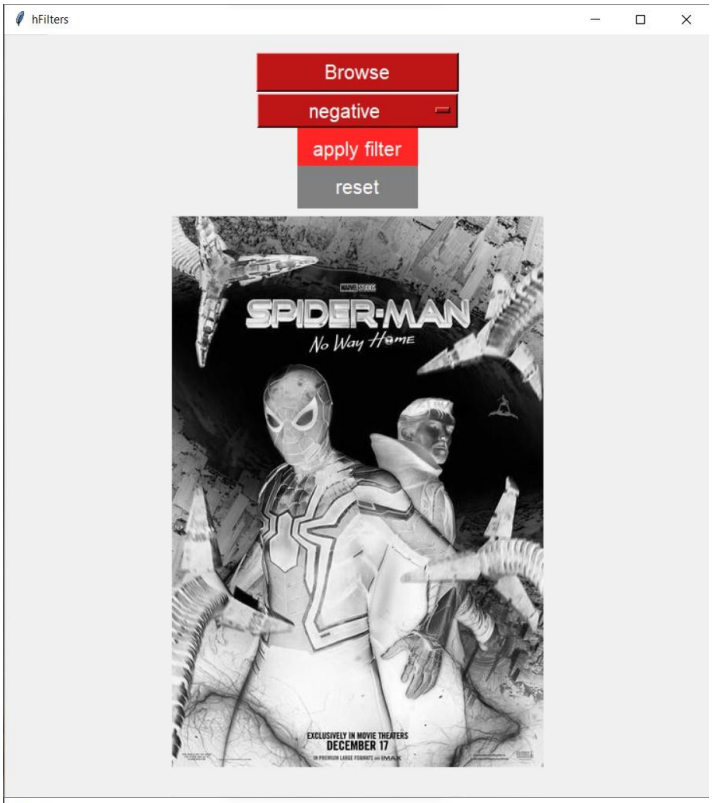
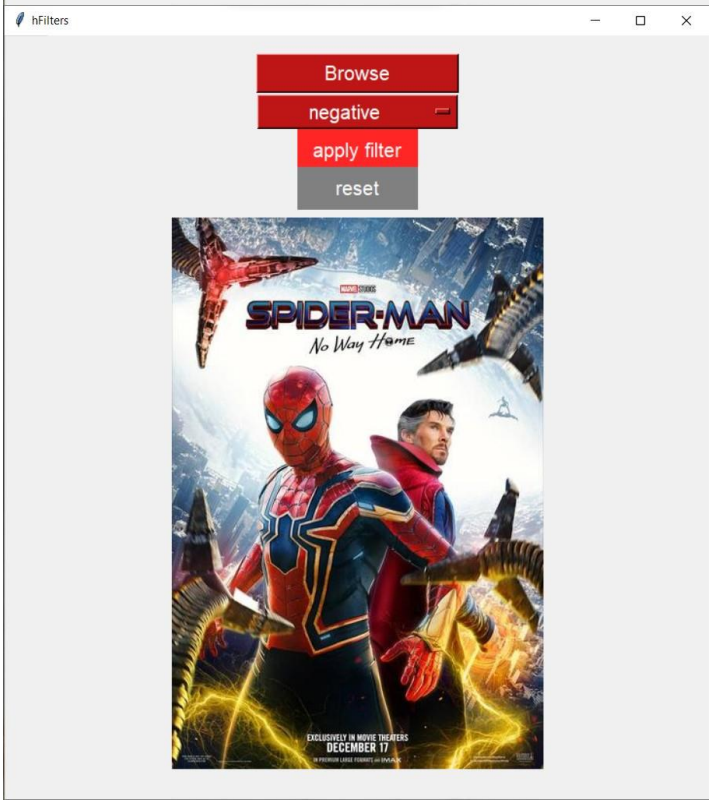
- **A non-linear filtering**

Ex: Median filter

is useful in reducing impulsive, or salt-and-pepper noise (black and white dots)



- **gray level transformations.**
- **Linear**

Negative

negative transformation, which is invert of identity transformation. In negative transformation, each value of the input image is subtracted from the L-1 and mapped onto the output image