

Digital Image Processing Project

Project Idea :

This project makes image fusion using wavelet transform and noise reduction with median filter and Gaussian filter.

Project Features :

This project is divided into :

1. Image fusion.
2. Noise reduction.

Tools :

- GUI with PyQt5.
- open CV (cv2).
- wavelet transform library (PyWt).

Image Fusion and Noise Reduction

At the beginning of opening the program, this screen will appear. The screen is divided into two sections. The left section includes image fusion and the right section includes noise reduction.

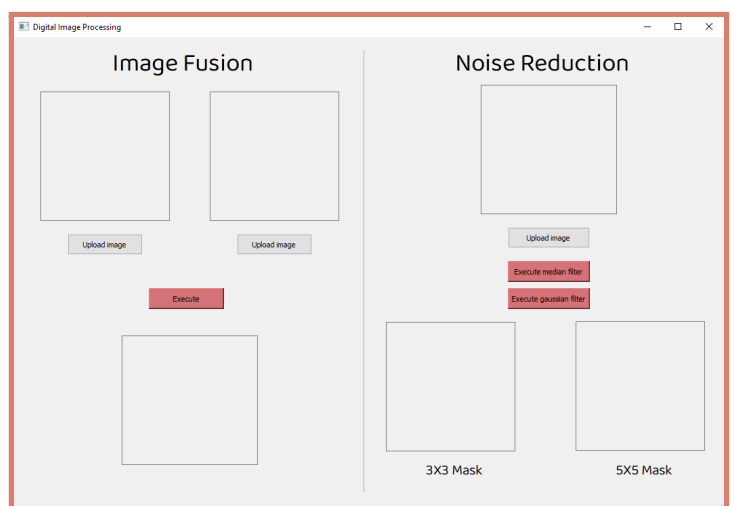


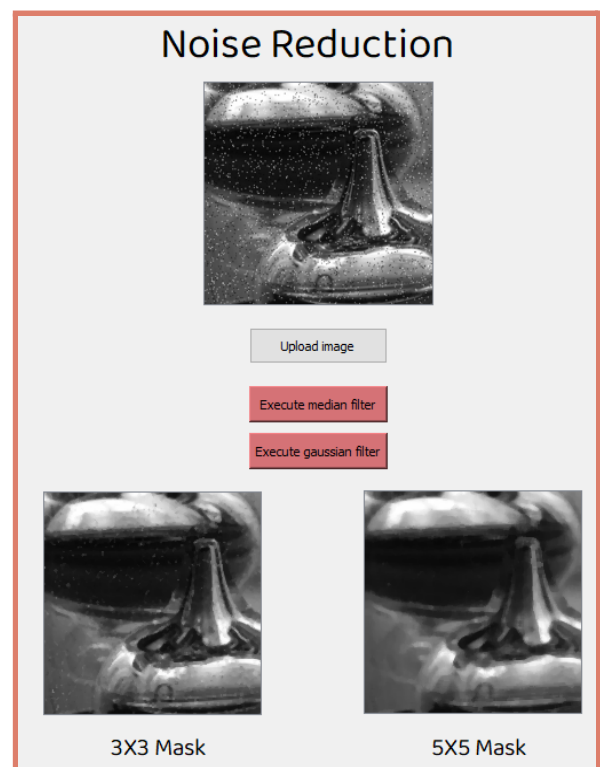
Image Fusion



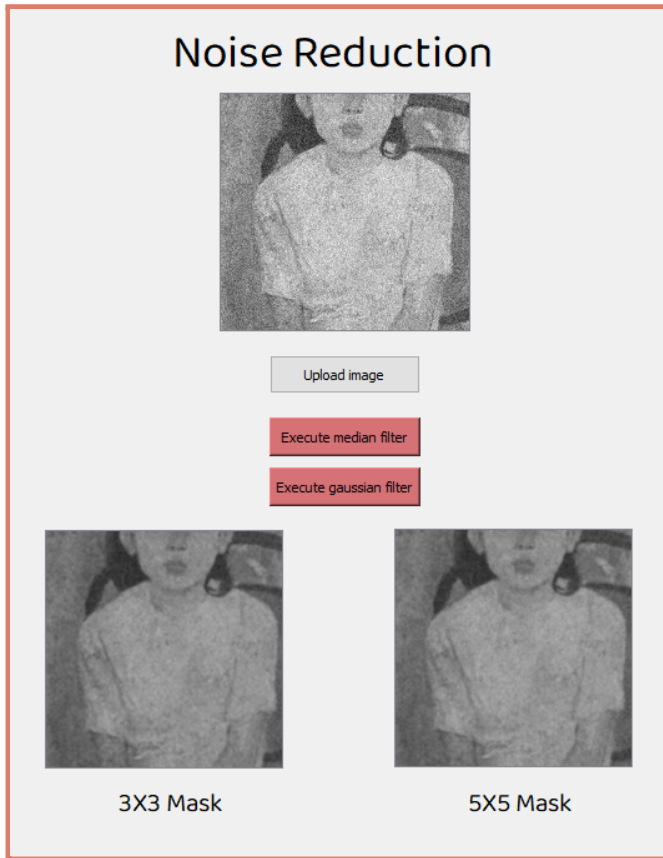
Image fusion section includes two labels that the image uploaded by the user will be added via the upload image button when the user press execute button the fused image will appear on the bottom label.

Noise Reduction Using Median Filter

Noise Reduction section includes upper label that The image uploaded by the user will be added via the upload image button when the user press execute median filter button the noise will reduce and display in the bottom labels. The left bottom label display image with median filter with 3X3 mask and the right bottom label display 5X5 mask median



Noise Reduction Using Gaussian Filter



Noise Reduction section includes upper label that The image uploaded by the user will be added via the upload image button when the user press execute Gaussian filter button the noise will reduce and display in the bottom labels. The left bottom label display image with Gaussian filter with 3X3 mask and the right bottom label display 5X5 mask median

Team members :

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