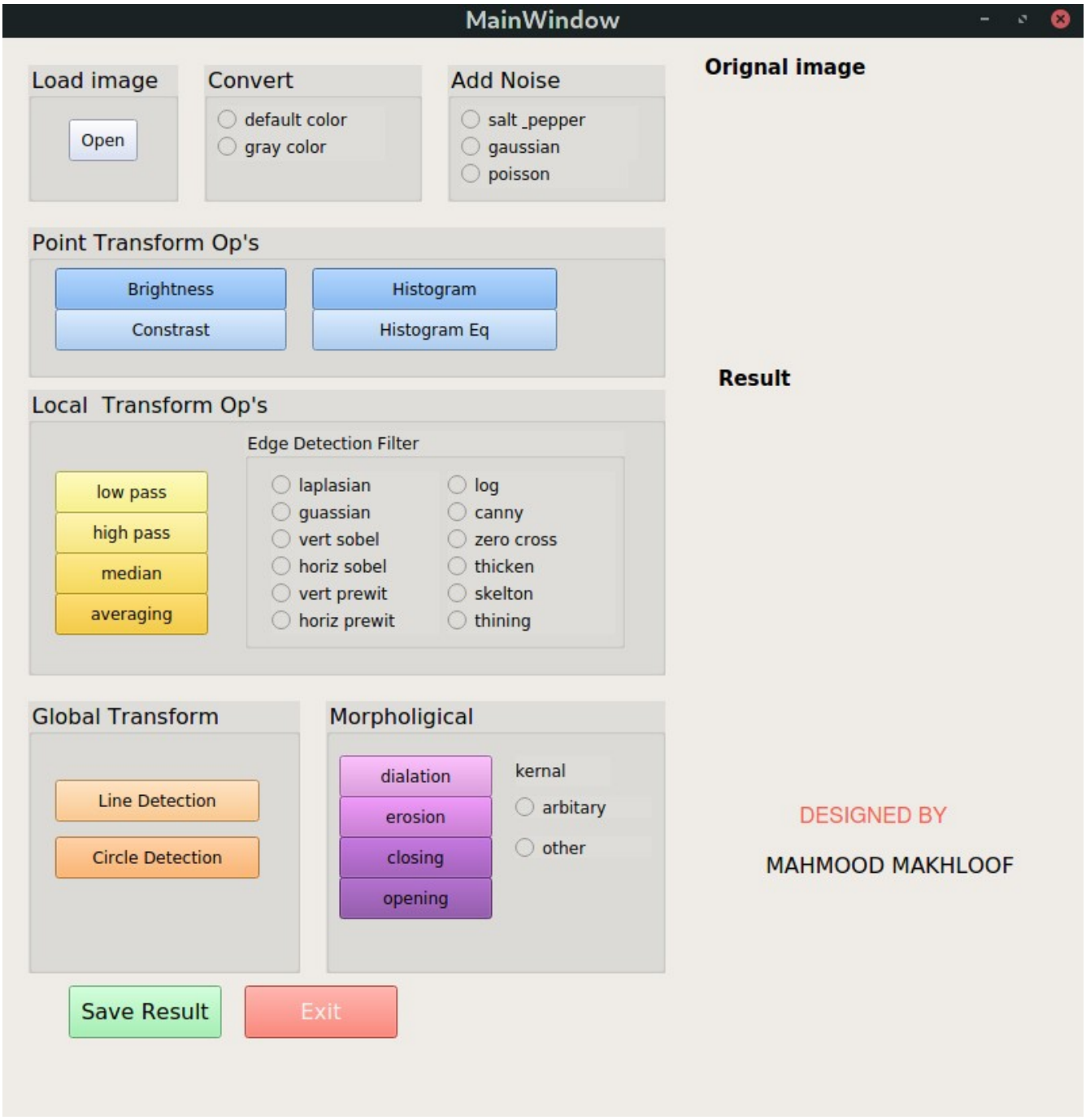
Faculty of electronic engineering
Image processing
Date : 11 Jul 2021
To instructor : Dr Mohamed Berbar
Submitted by : Mahmood Abbas Makhloof / Sec-3

Programming Assignment

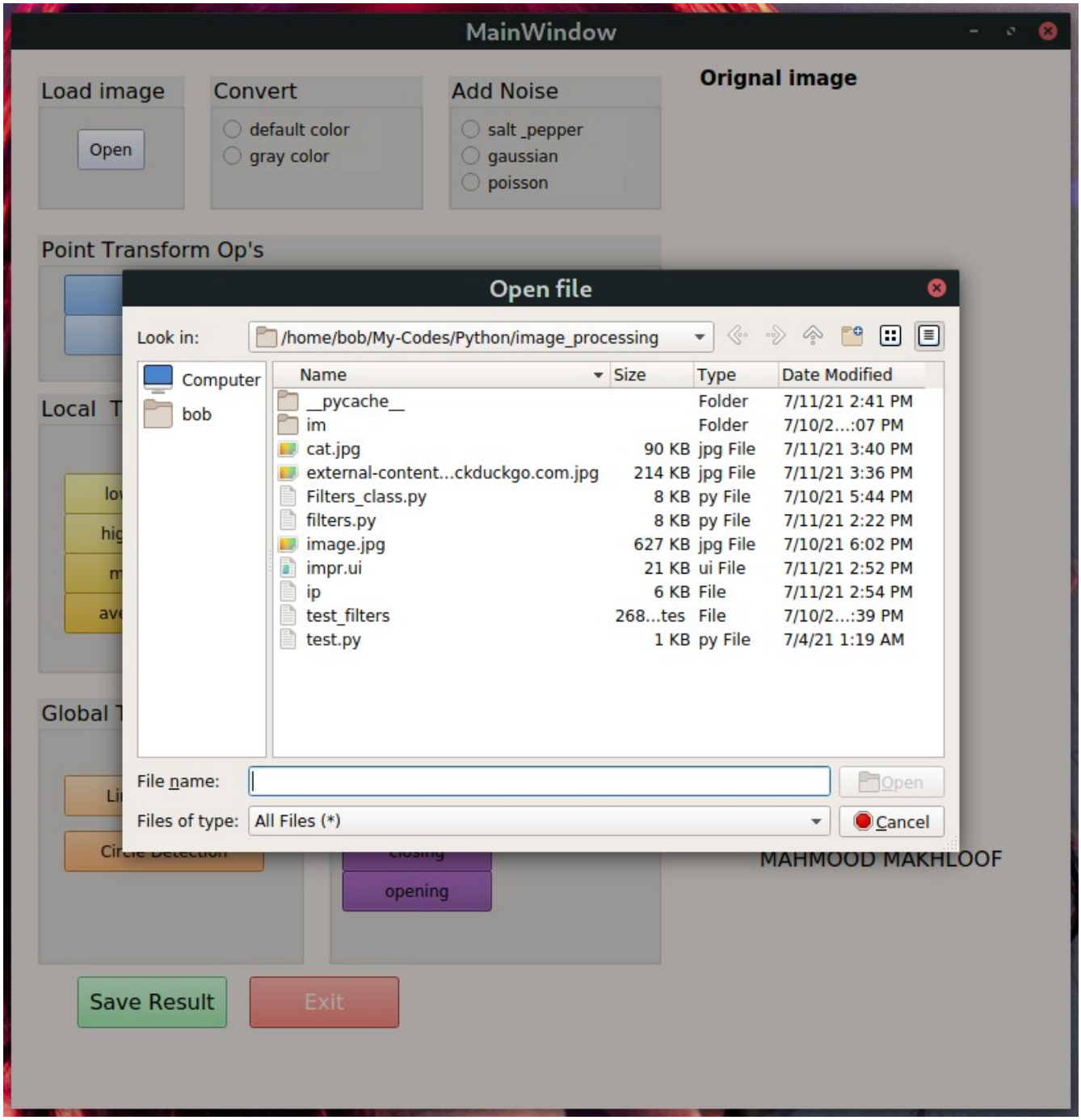
Intro

This project for applying filters (masks) on selected image , built with python , openCv framework and GUI with PyQt5

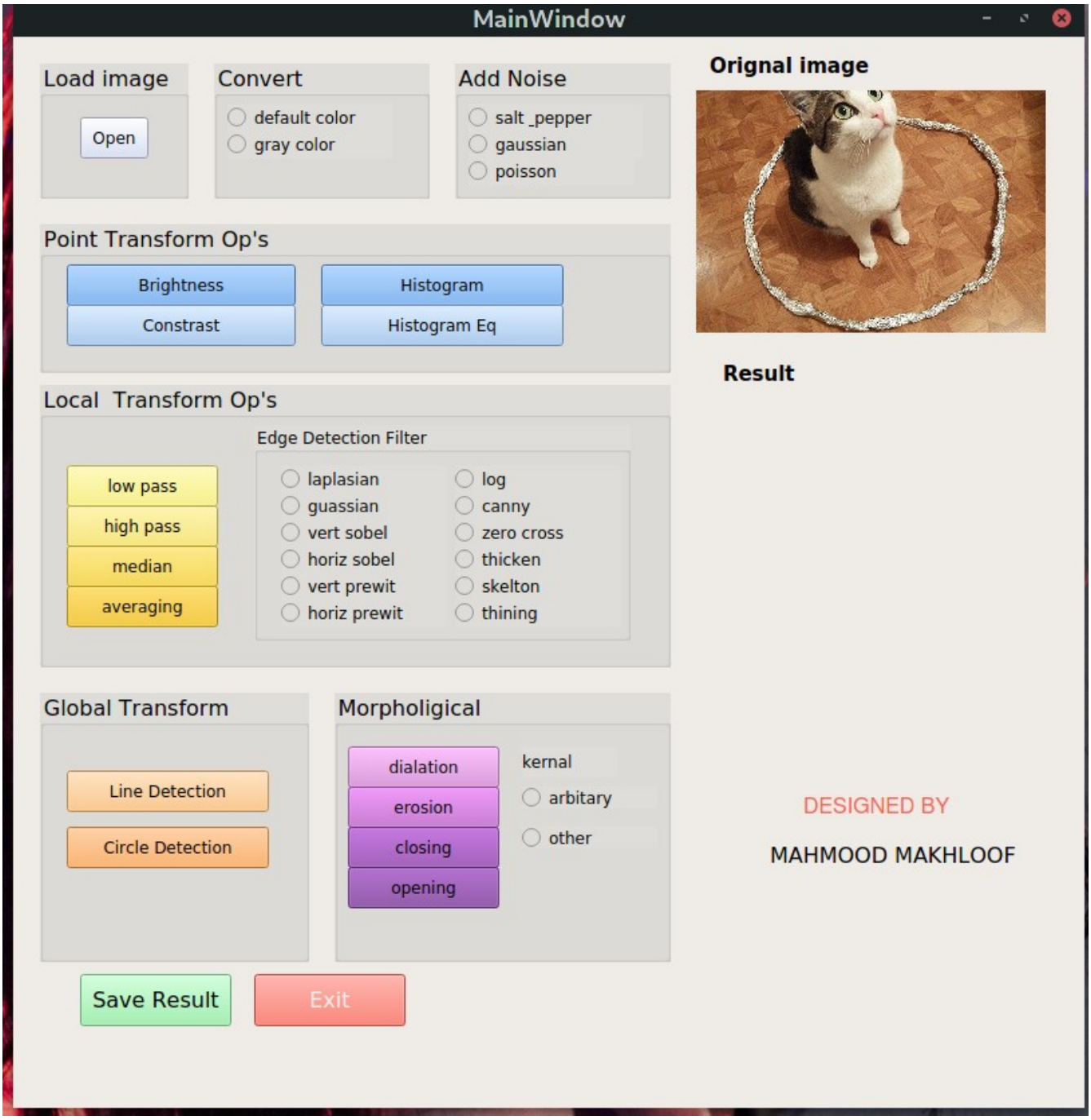
1- this is main window



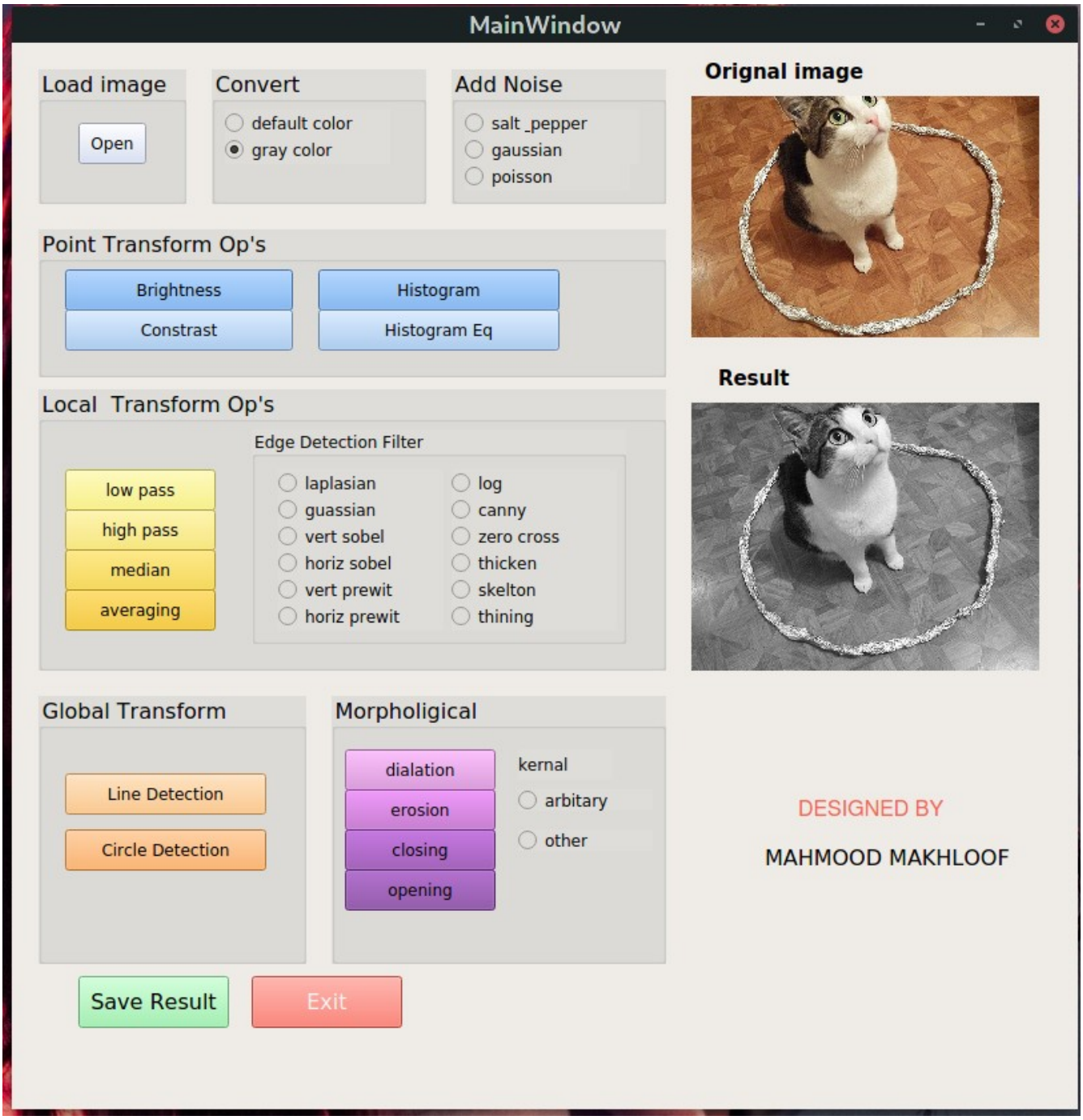
2- when open button is clicked , the file browser opened and let you to select an image



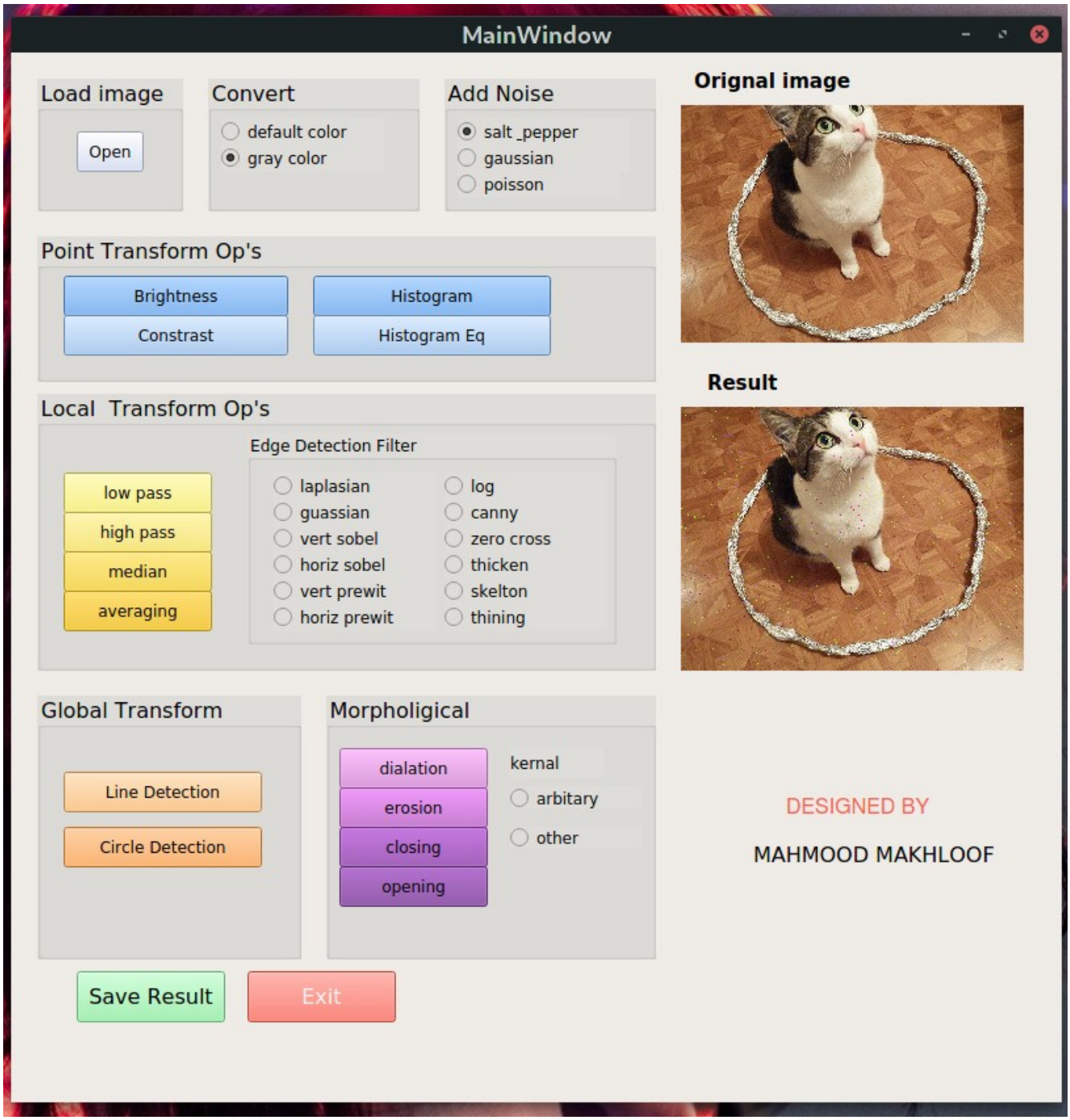
3- after you selected an image , it displayed



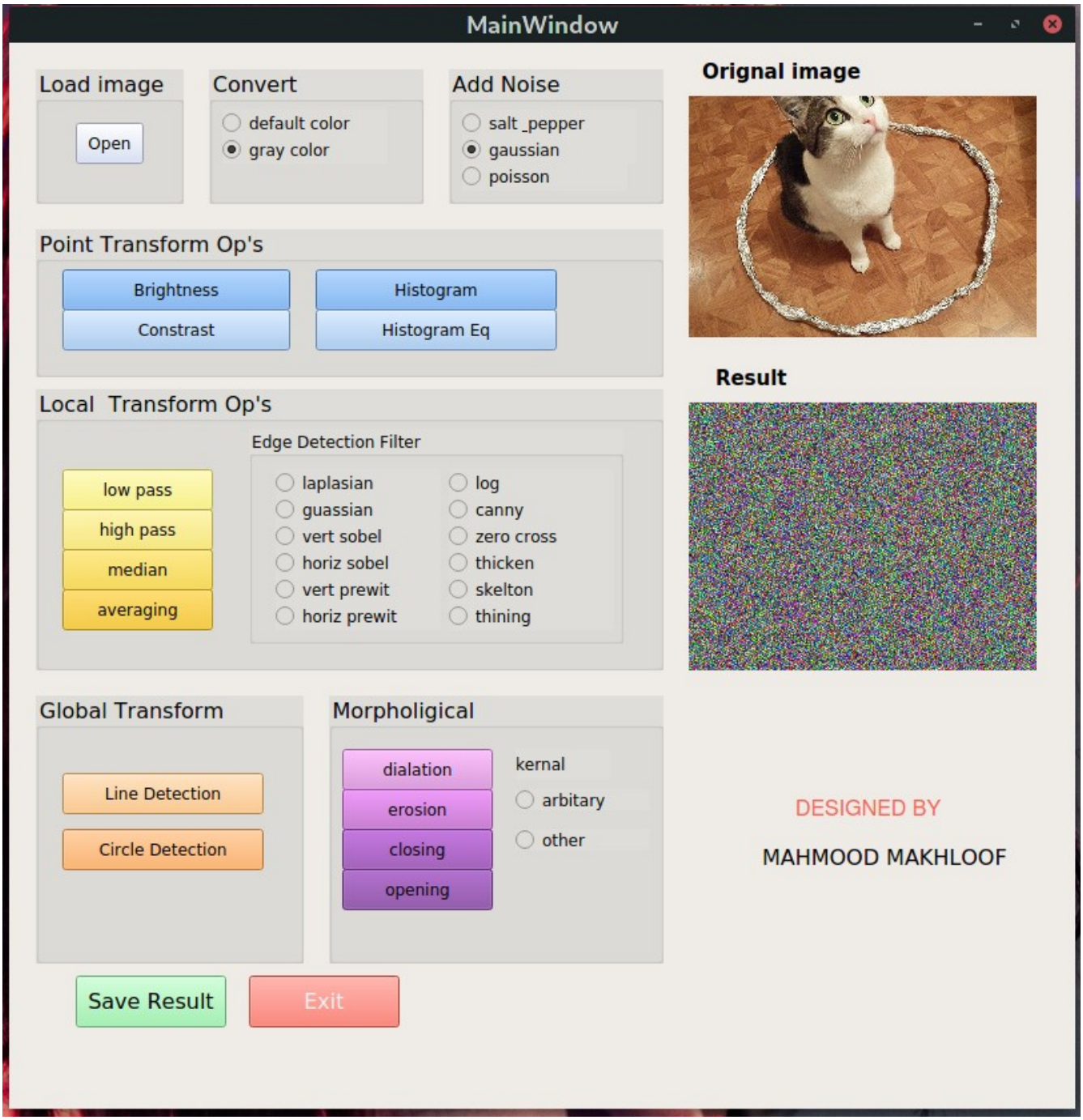
4- After gray color effect



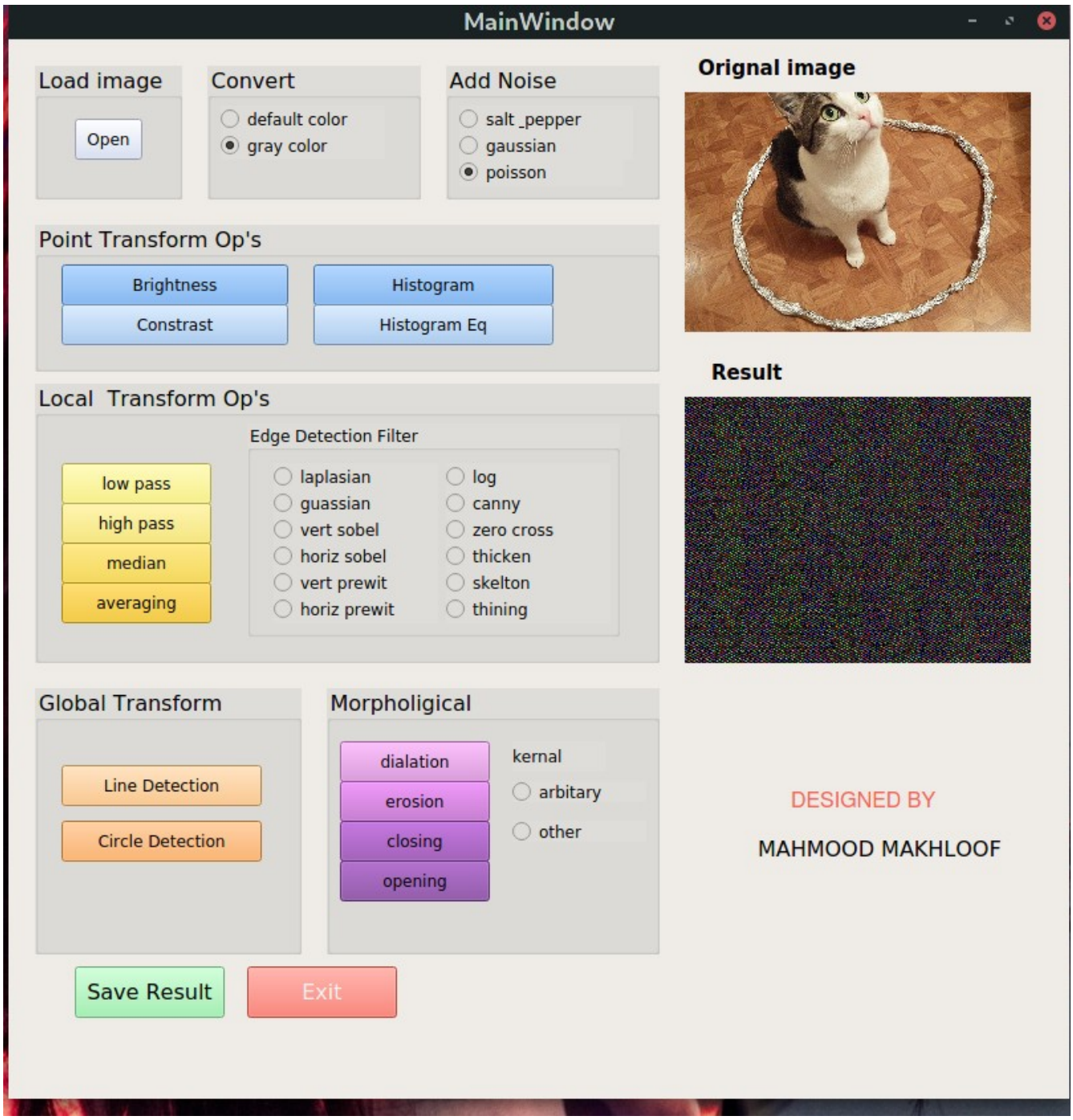
5- after applying noise from salt pepper type



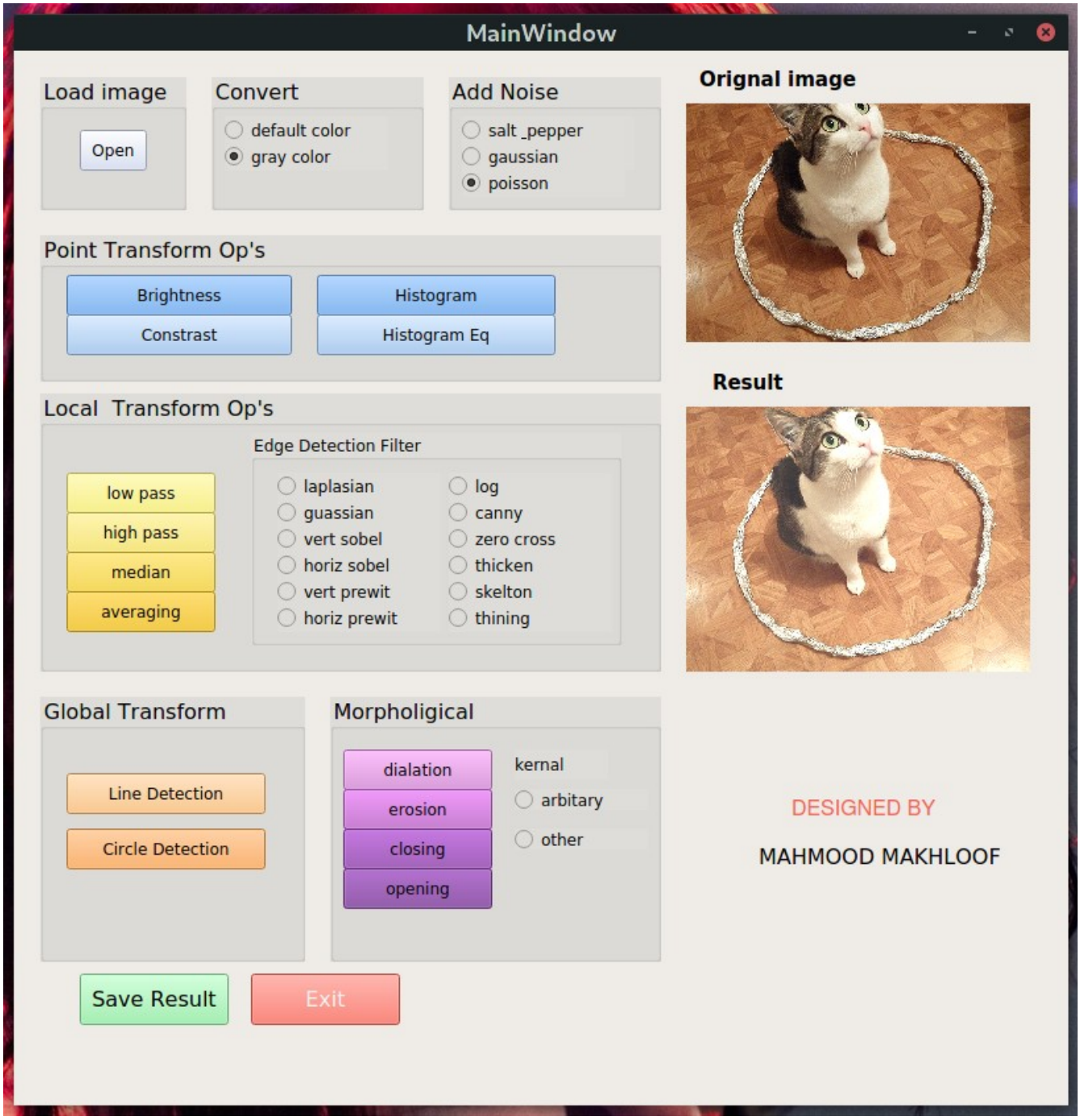
6- Guassian noise



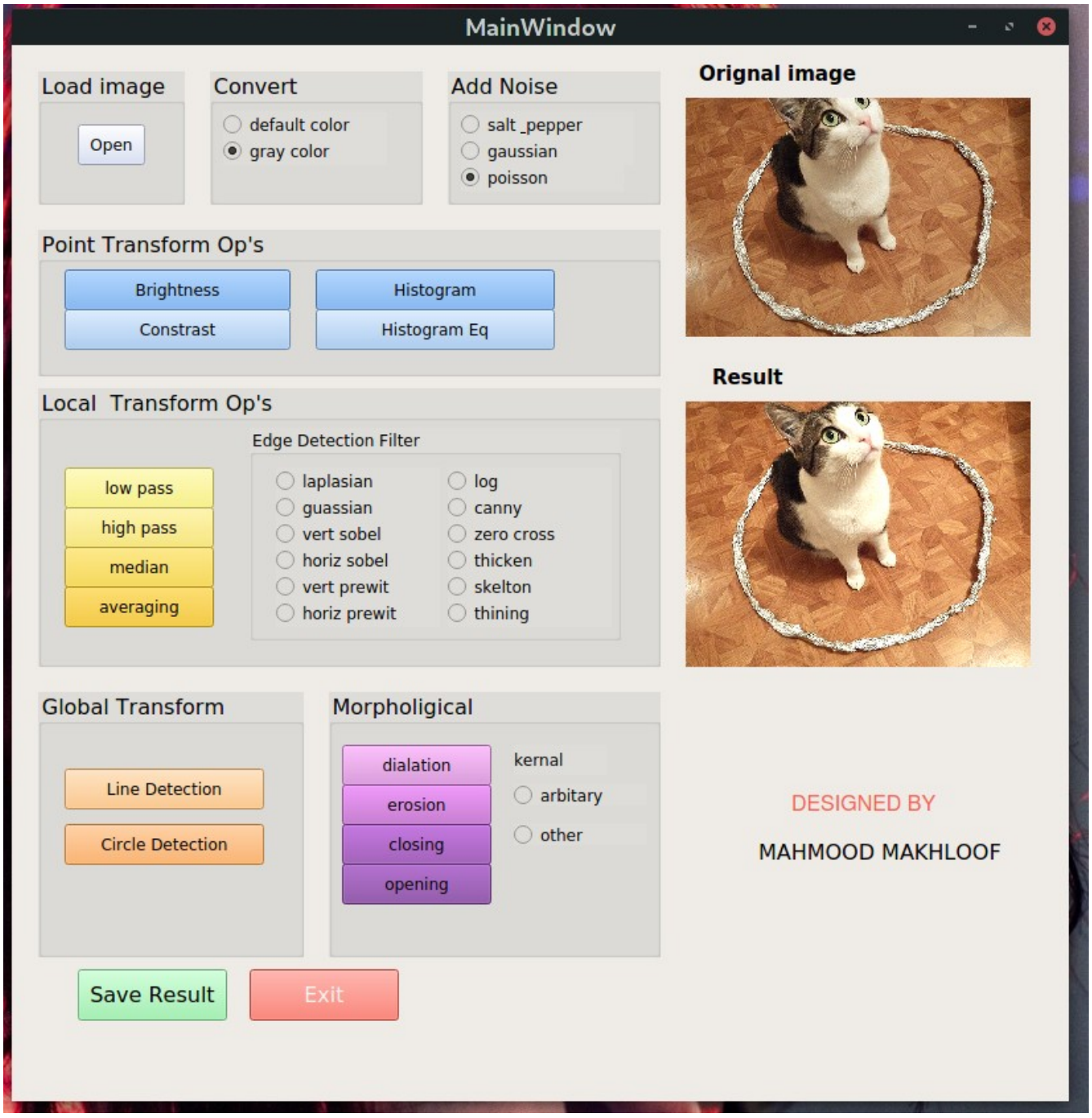
7- poisson noise



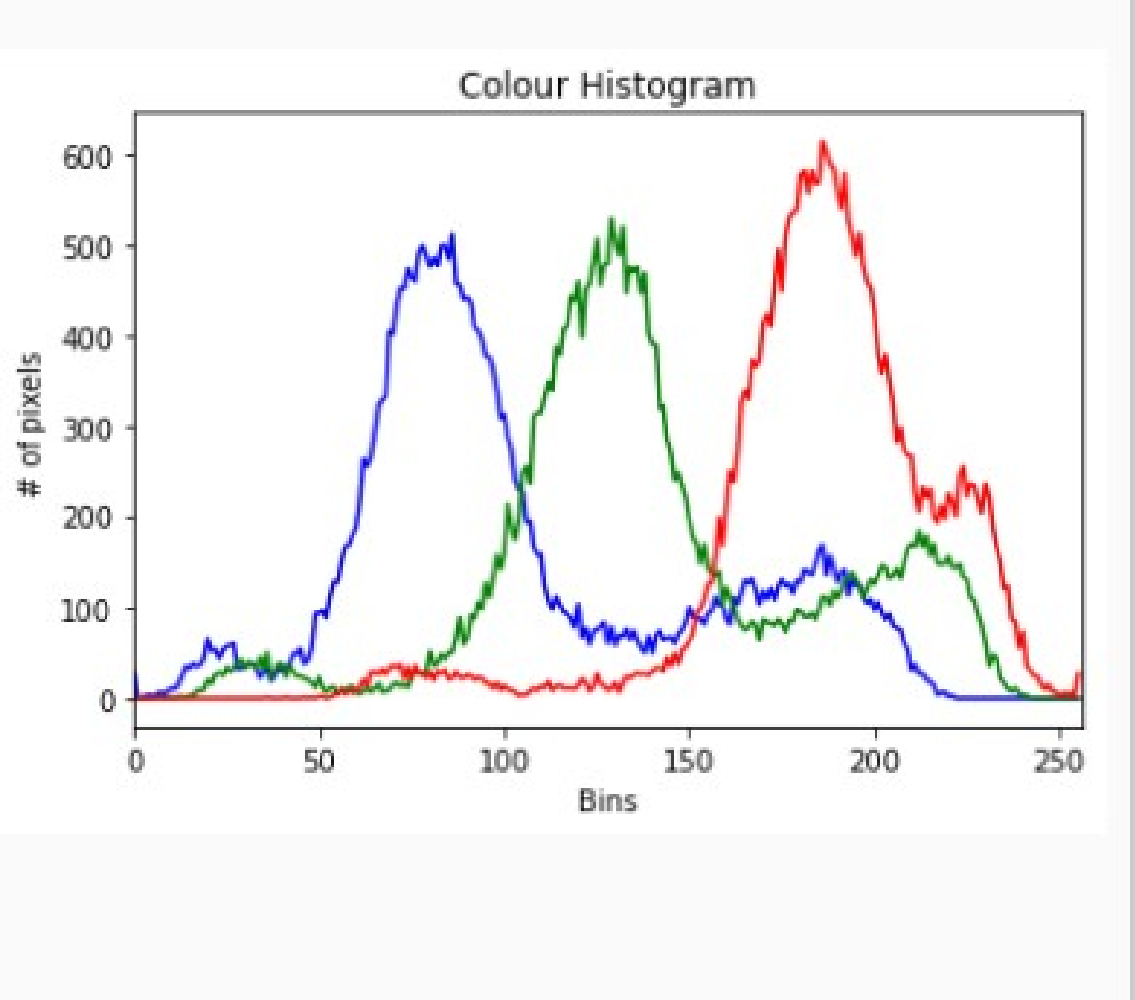
8- Brightness



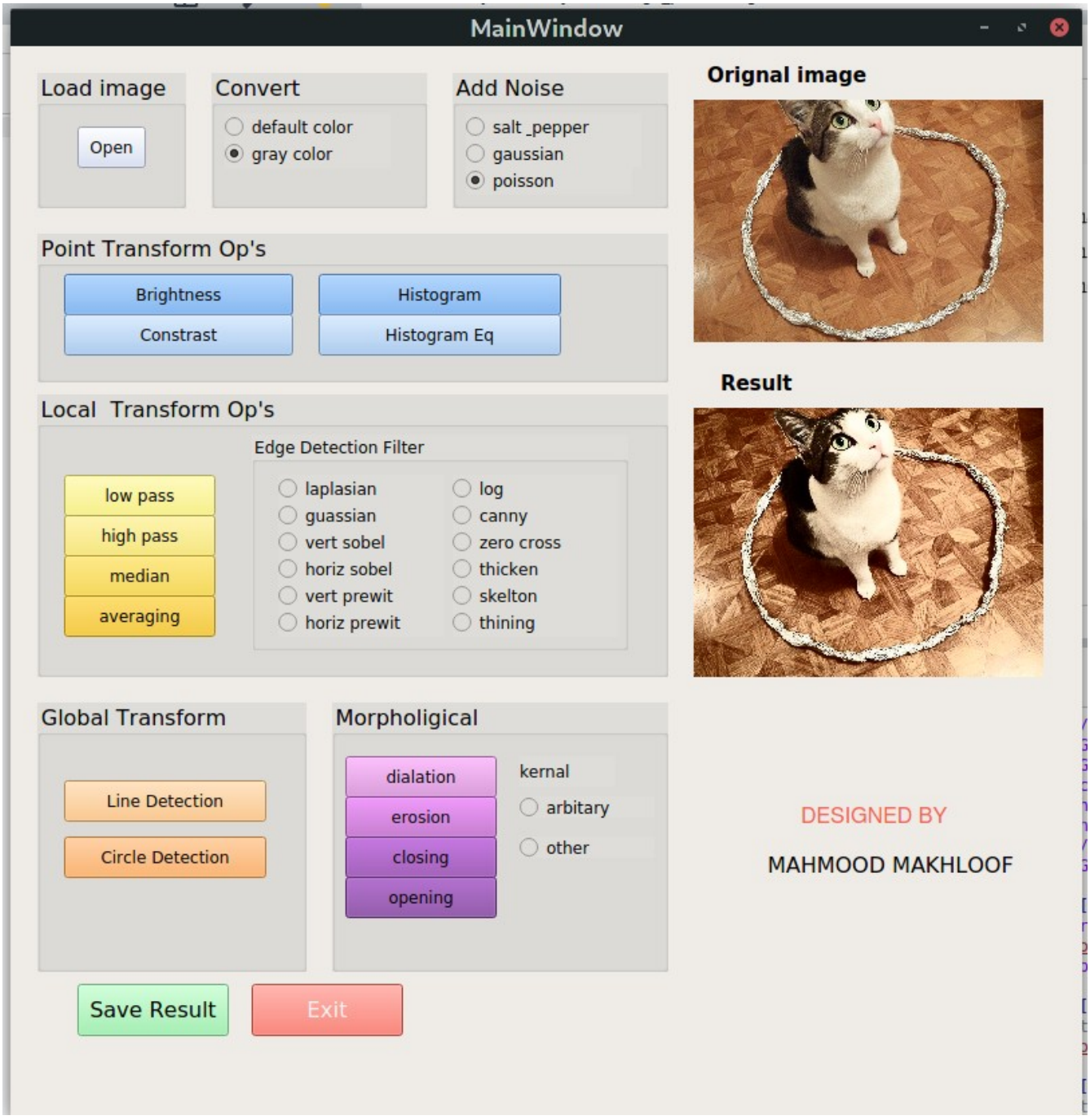
9- Constarast



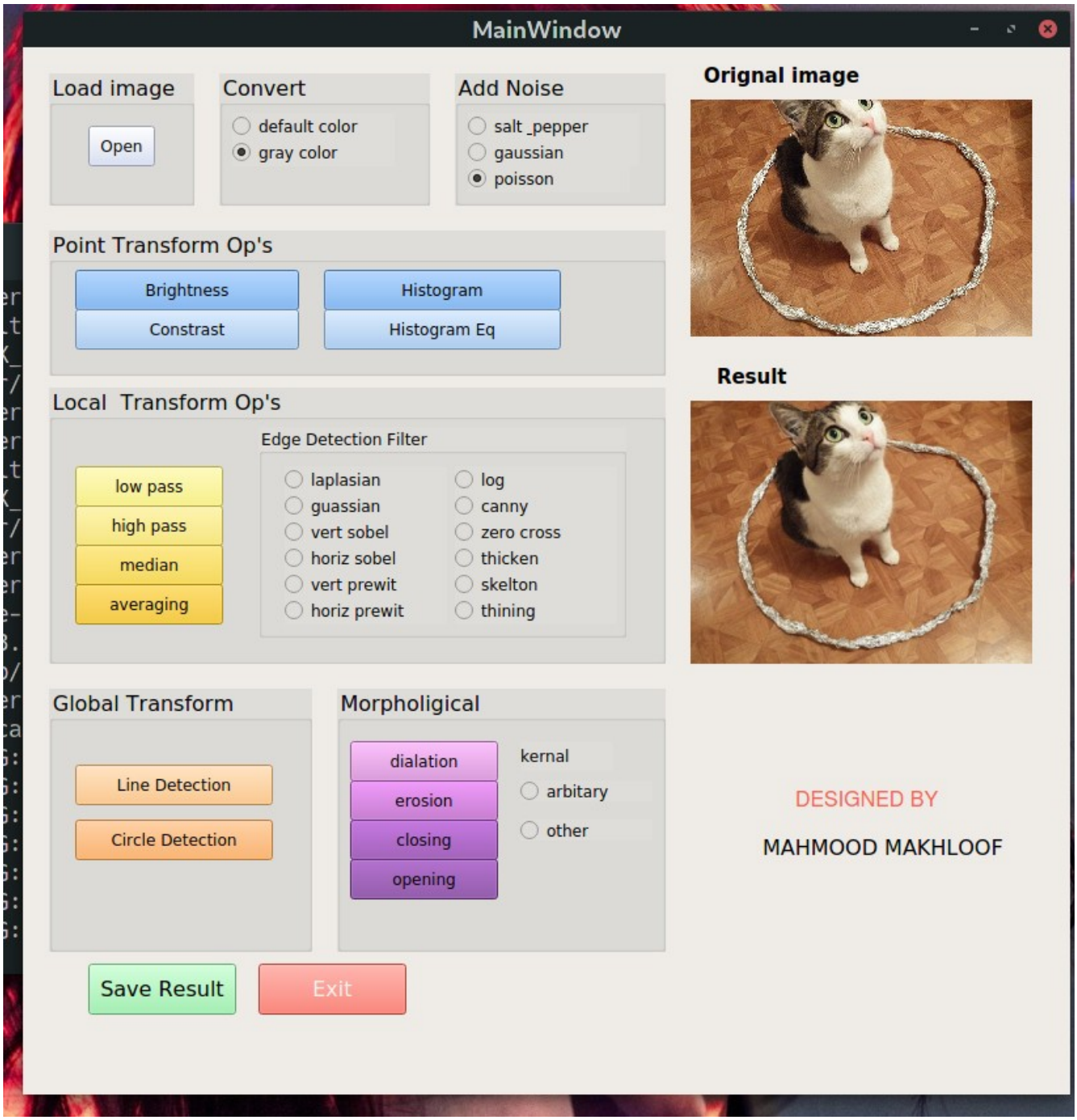
10 - Histogram



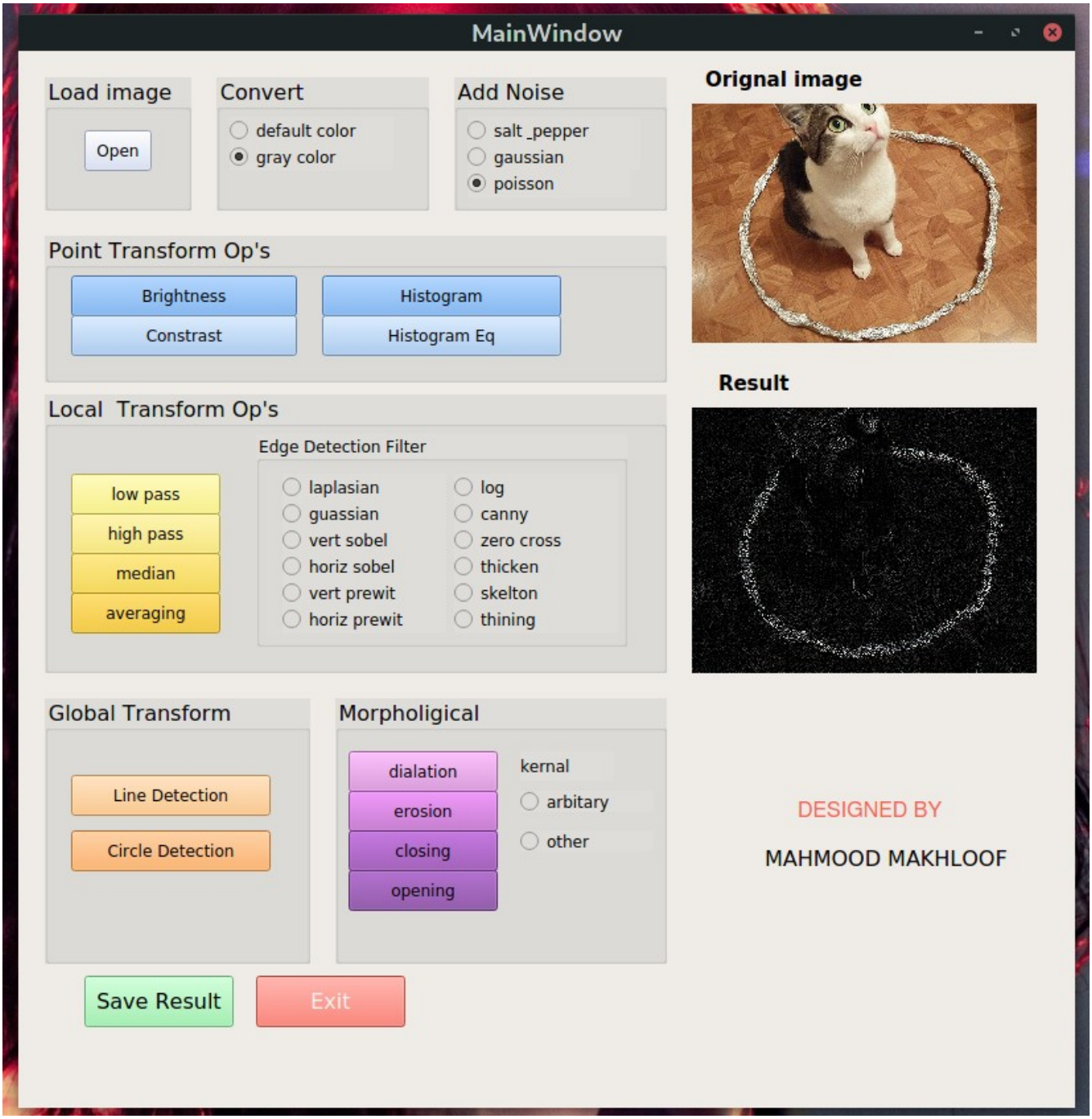
11- Histogram Equalization



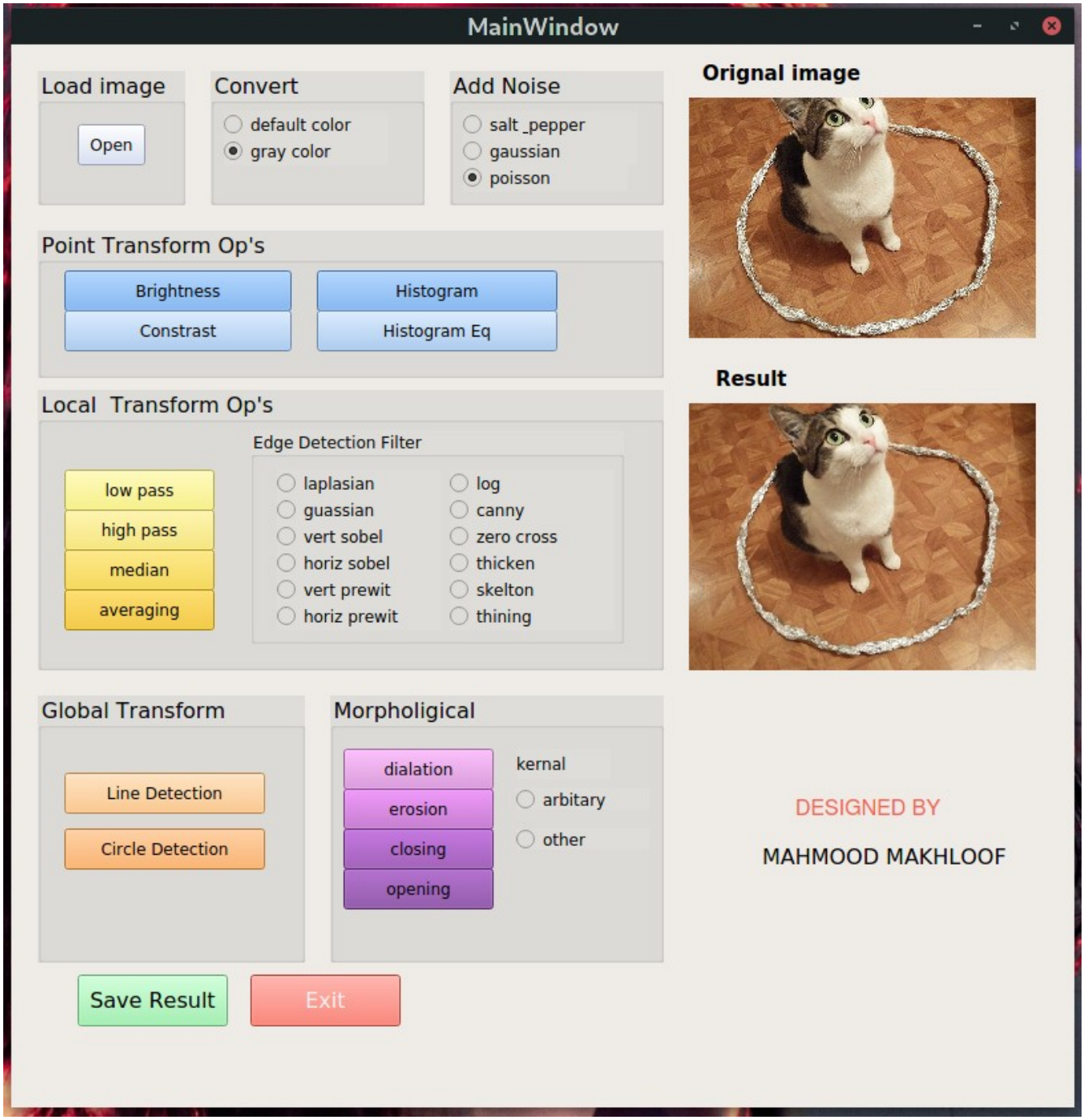
12- Low Pass Filter



13- High pass filter



14 - Median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Line Detection
Circle Detection
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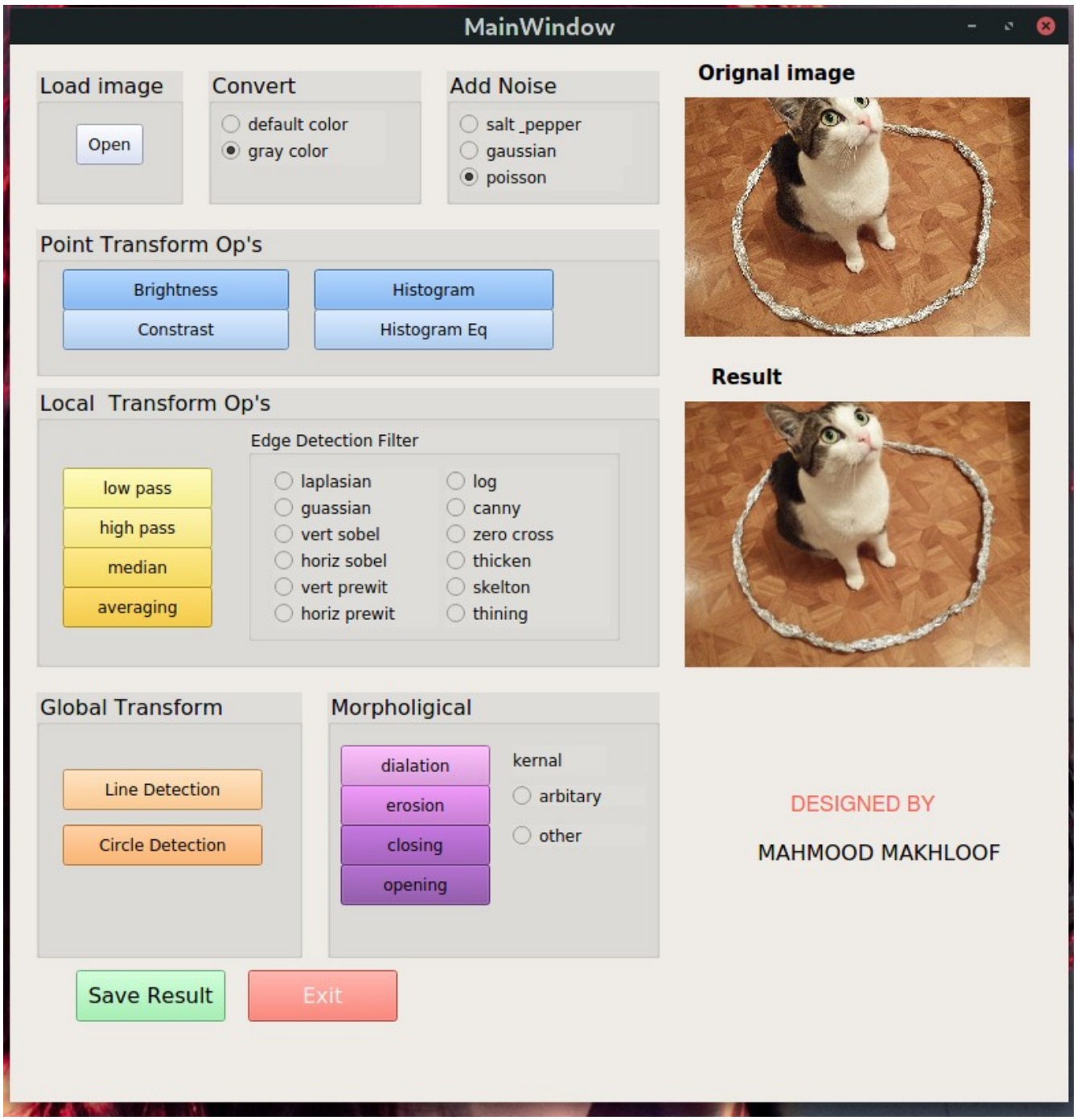
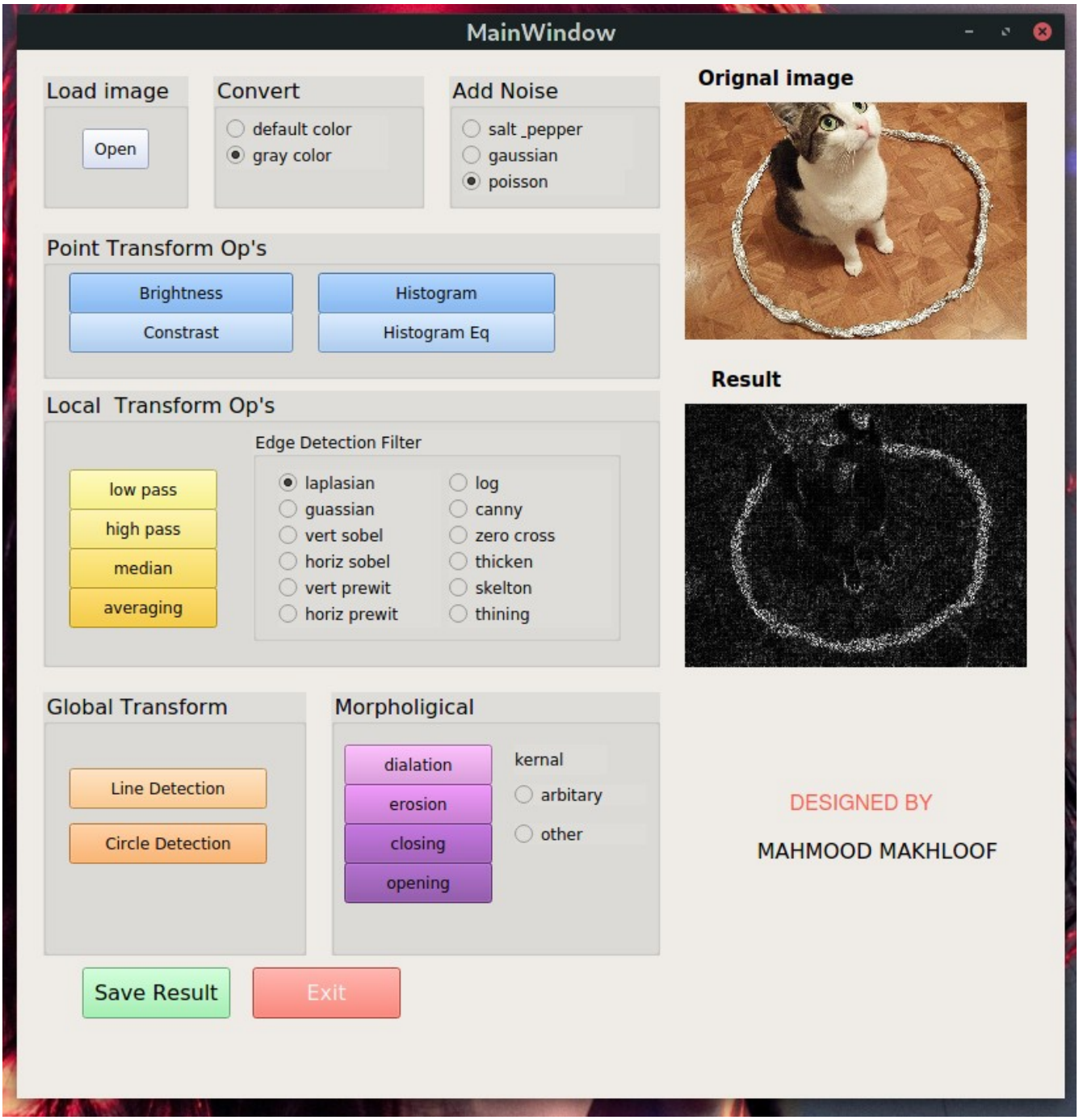
MAHMOOD MAKHLOOF
Save Result
Exit

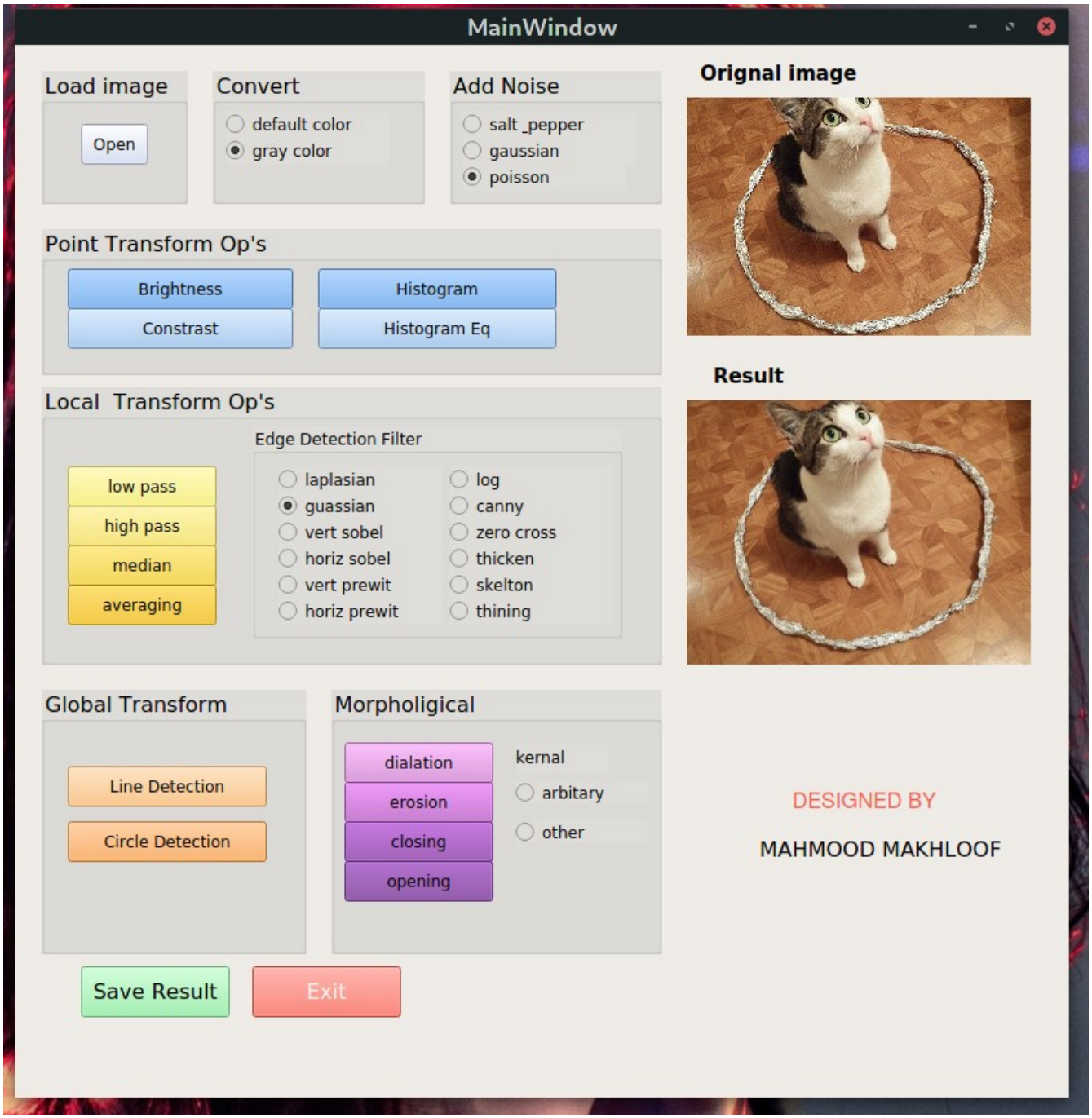
15 - Averaging Filter



16 - Laplacian



17- guassian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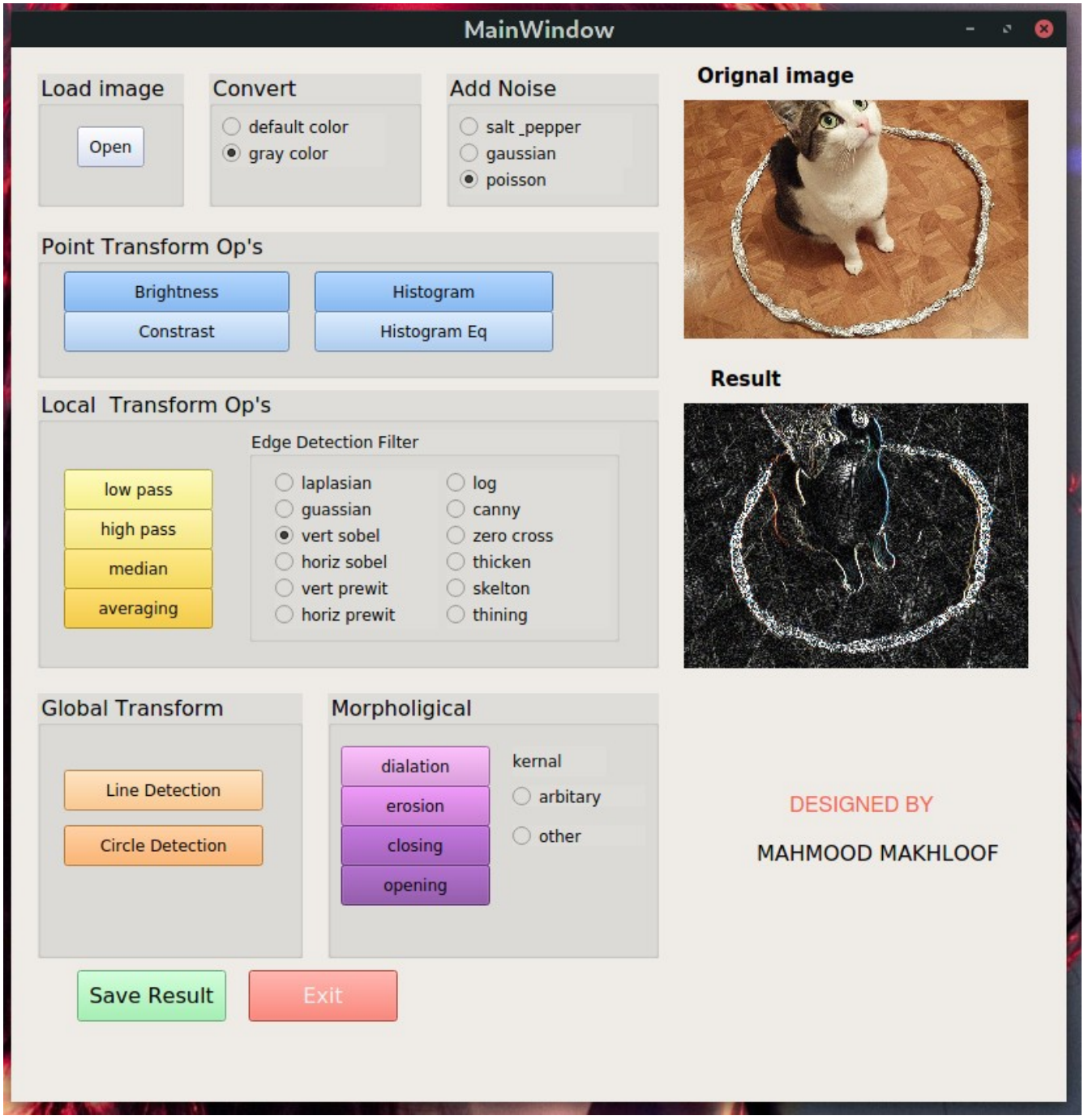
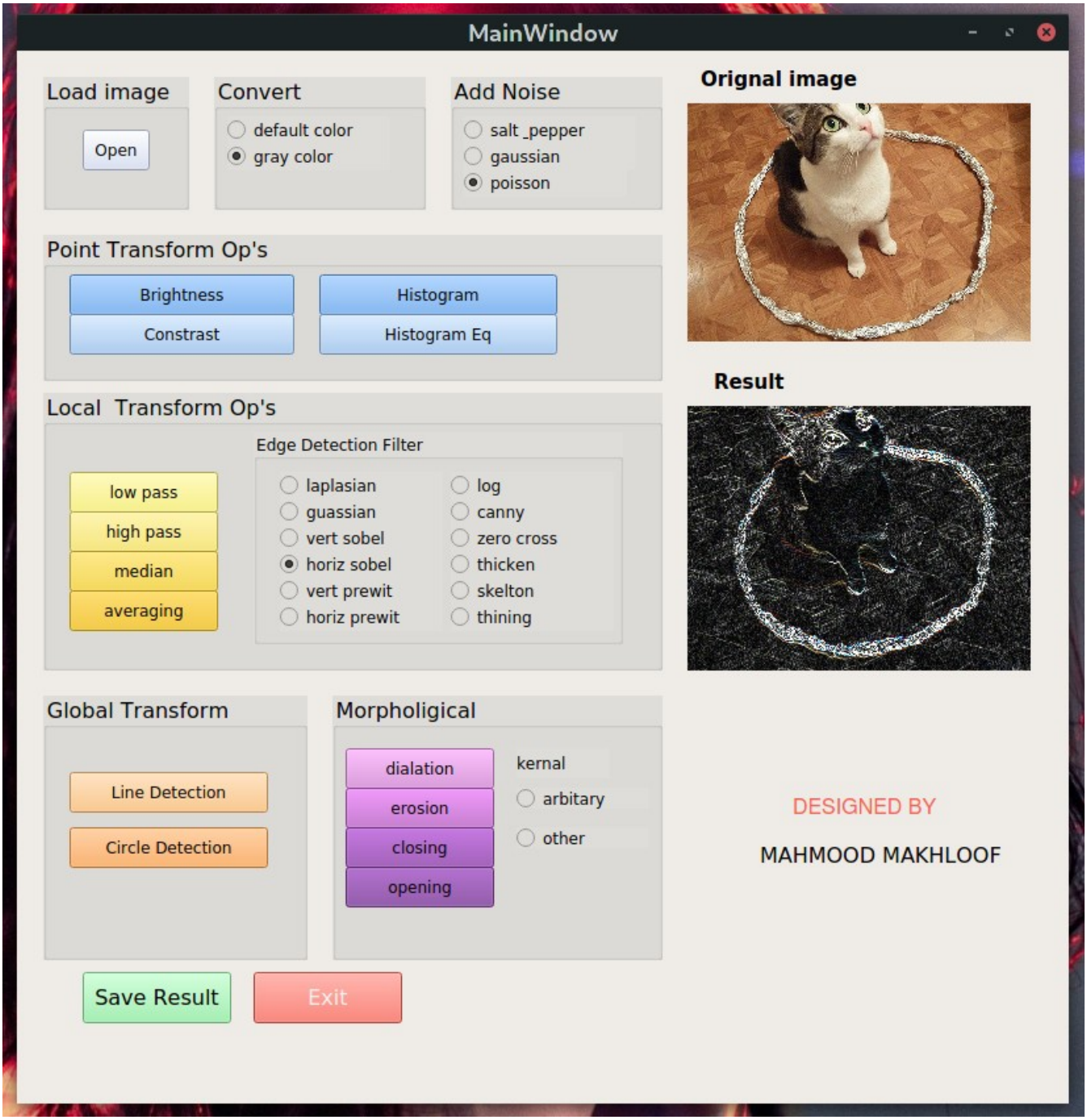
Save Result
Exit

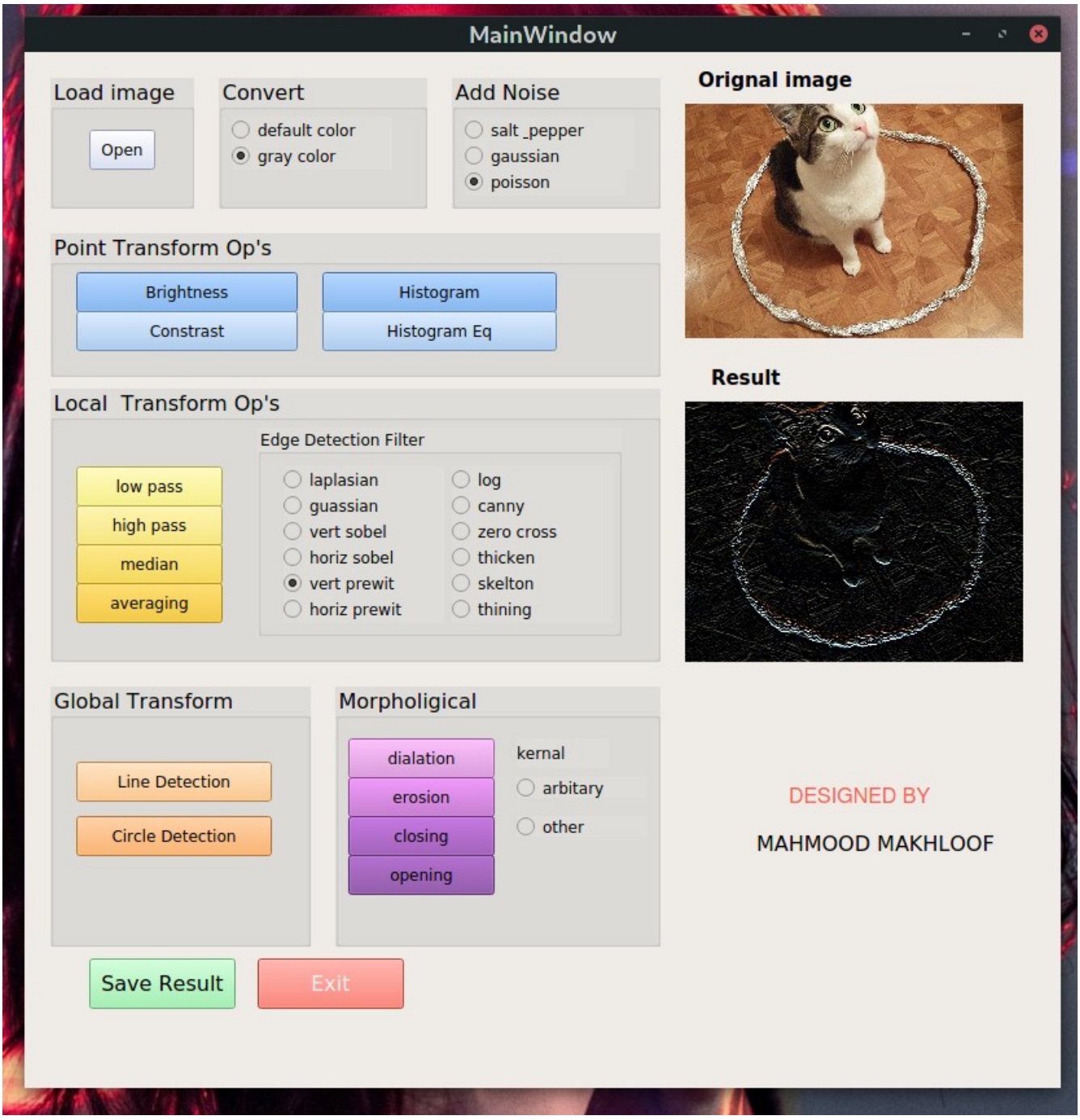
18- vrtical sobel



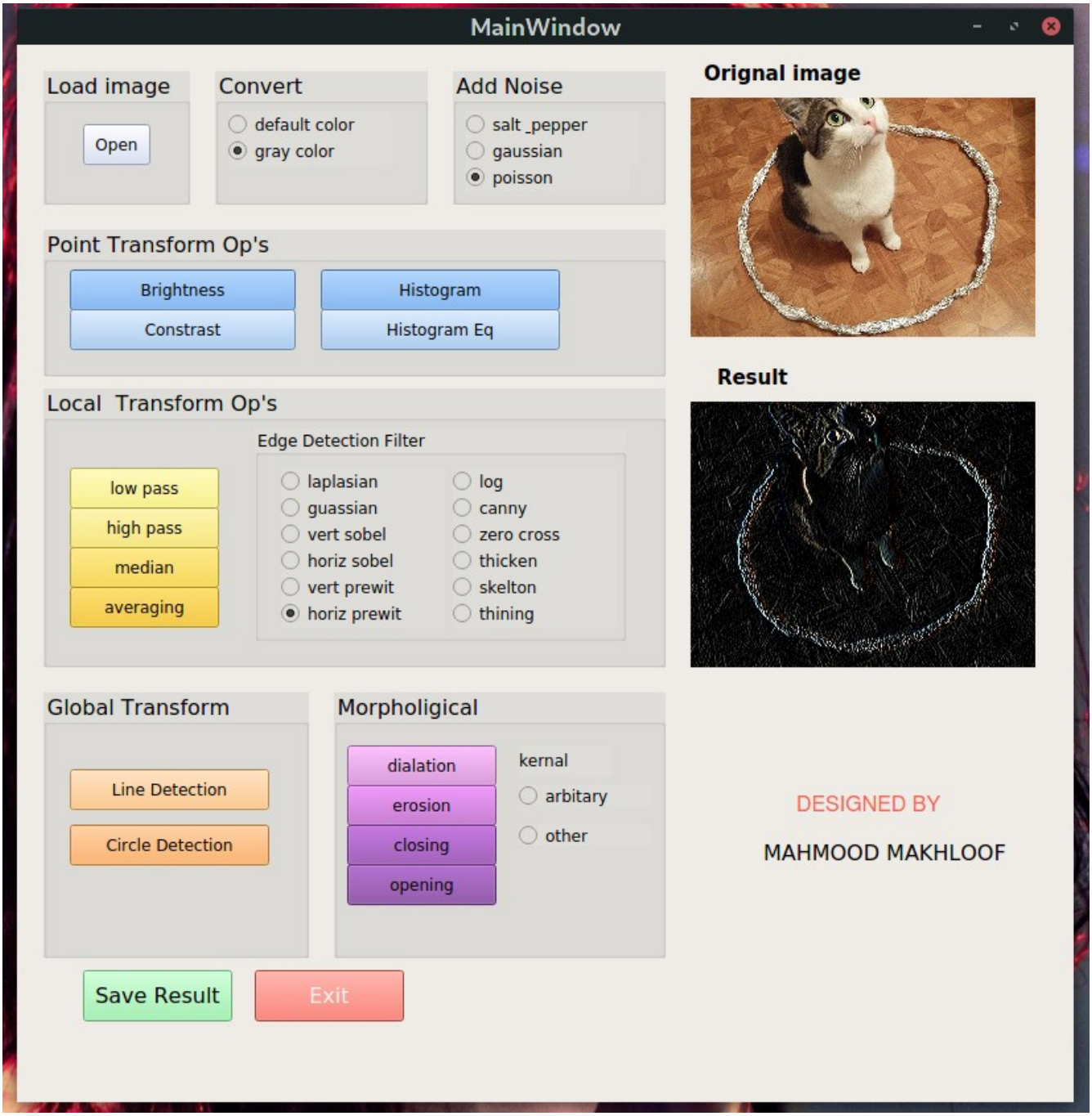
19 – horizental soble



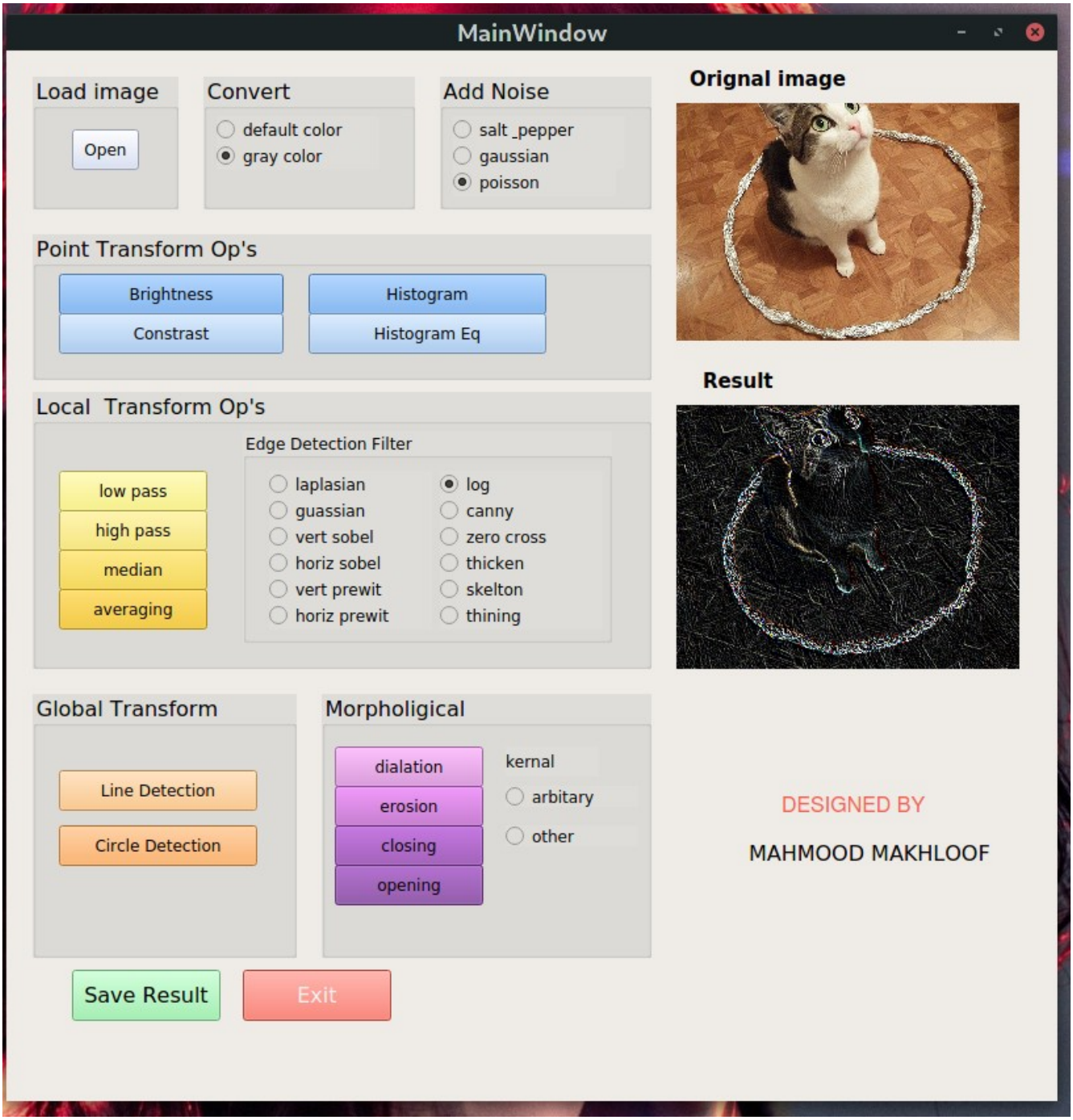
20 – vertical prewit



21 – horizental prewit



22- log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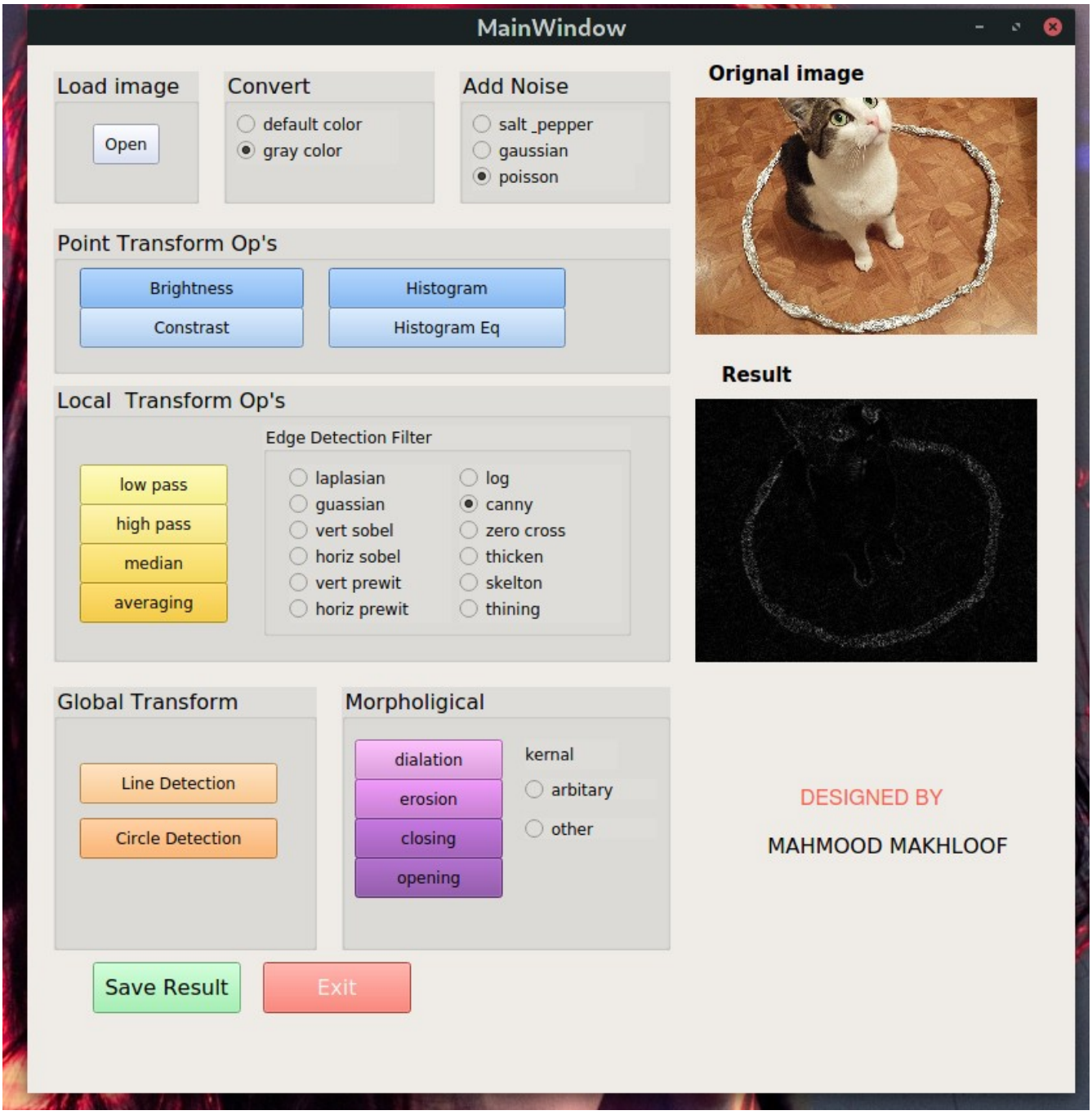
MAHMOOD MAKHLOOF
Save Result
Exit

23 - canny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Save Result
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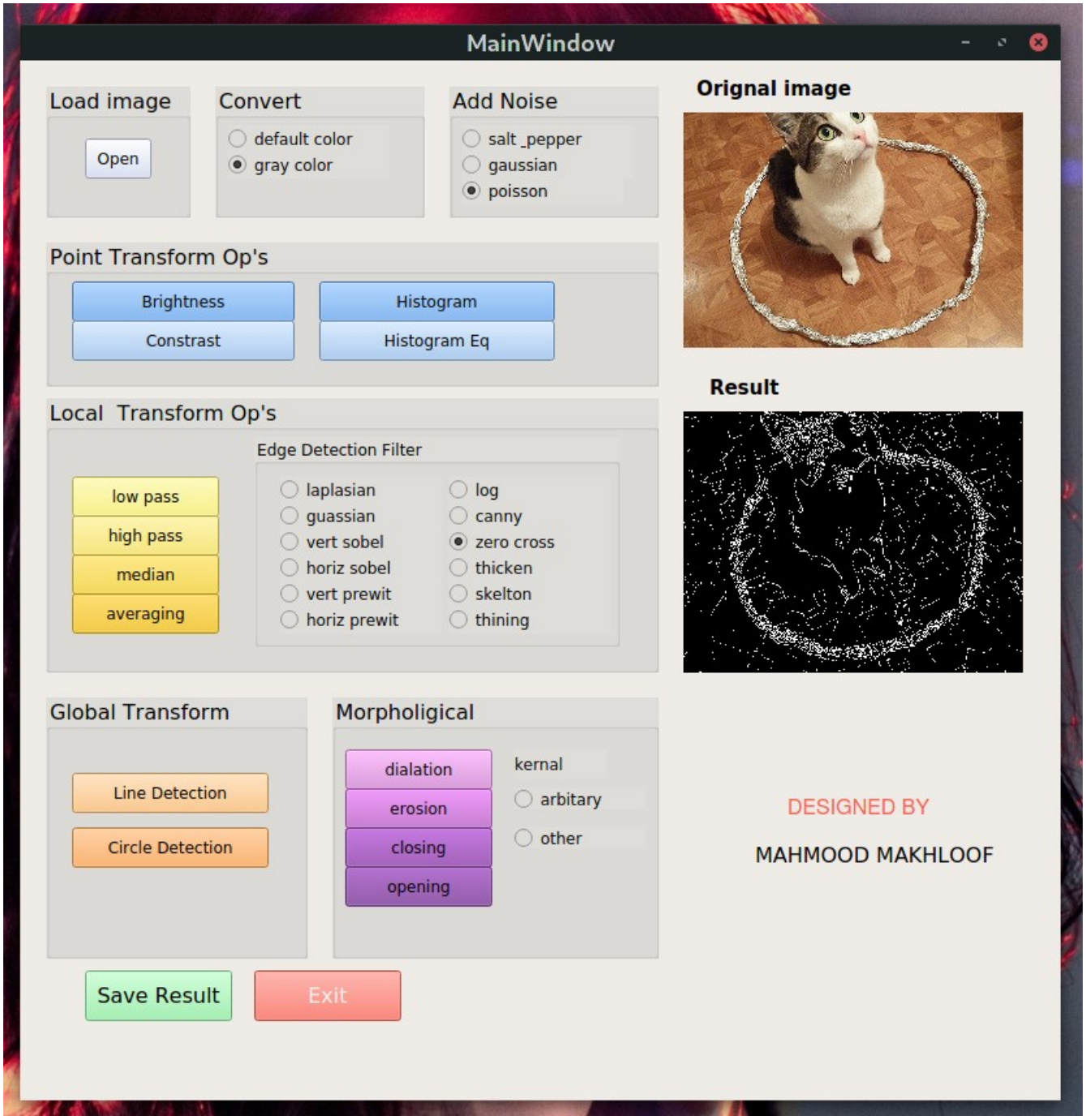
24- zero crossing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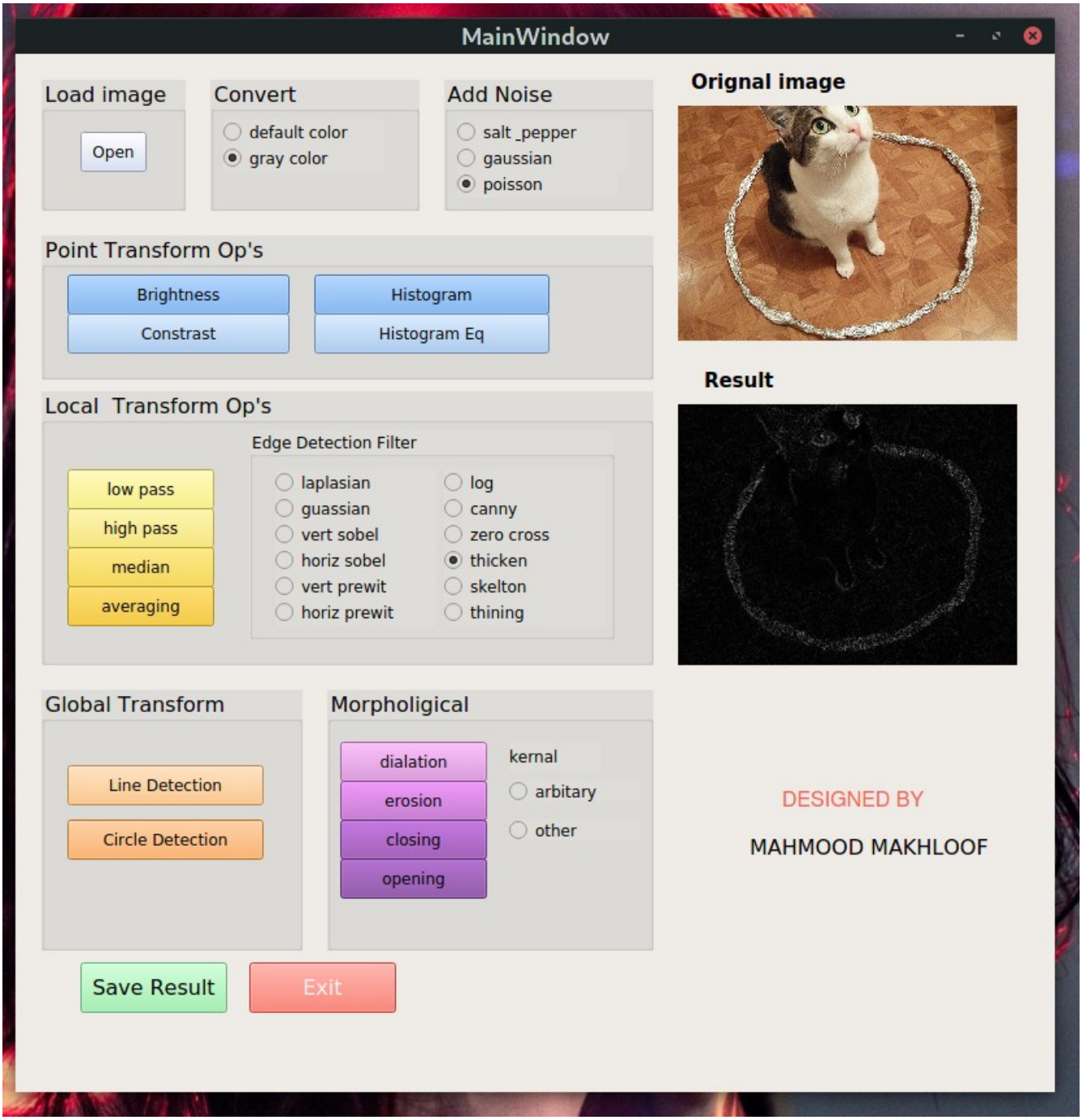
25- thicken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Save Result
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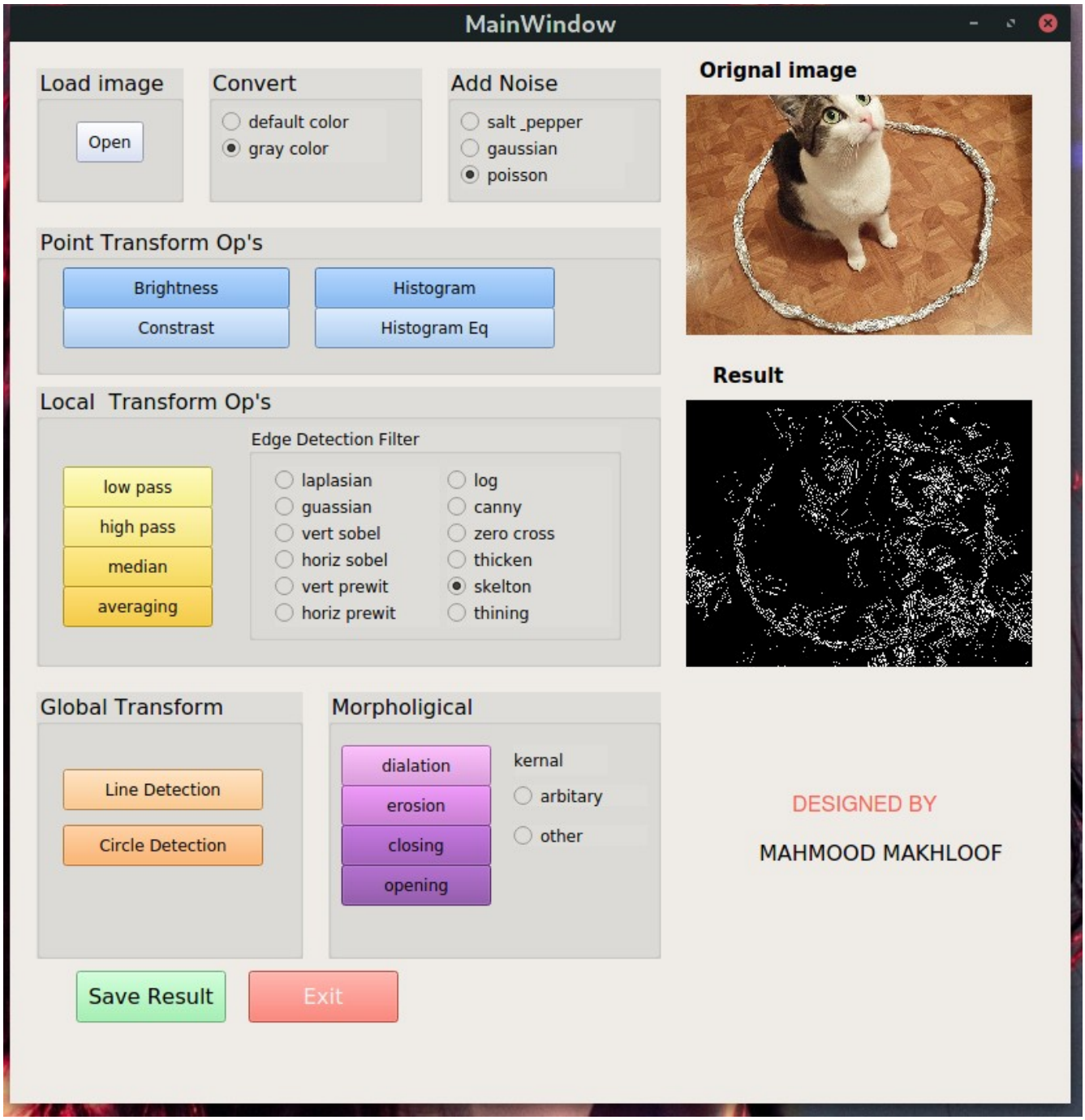
26 – skelton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Save Result
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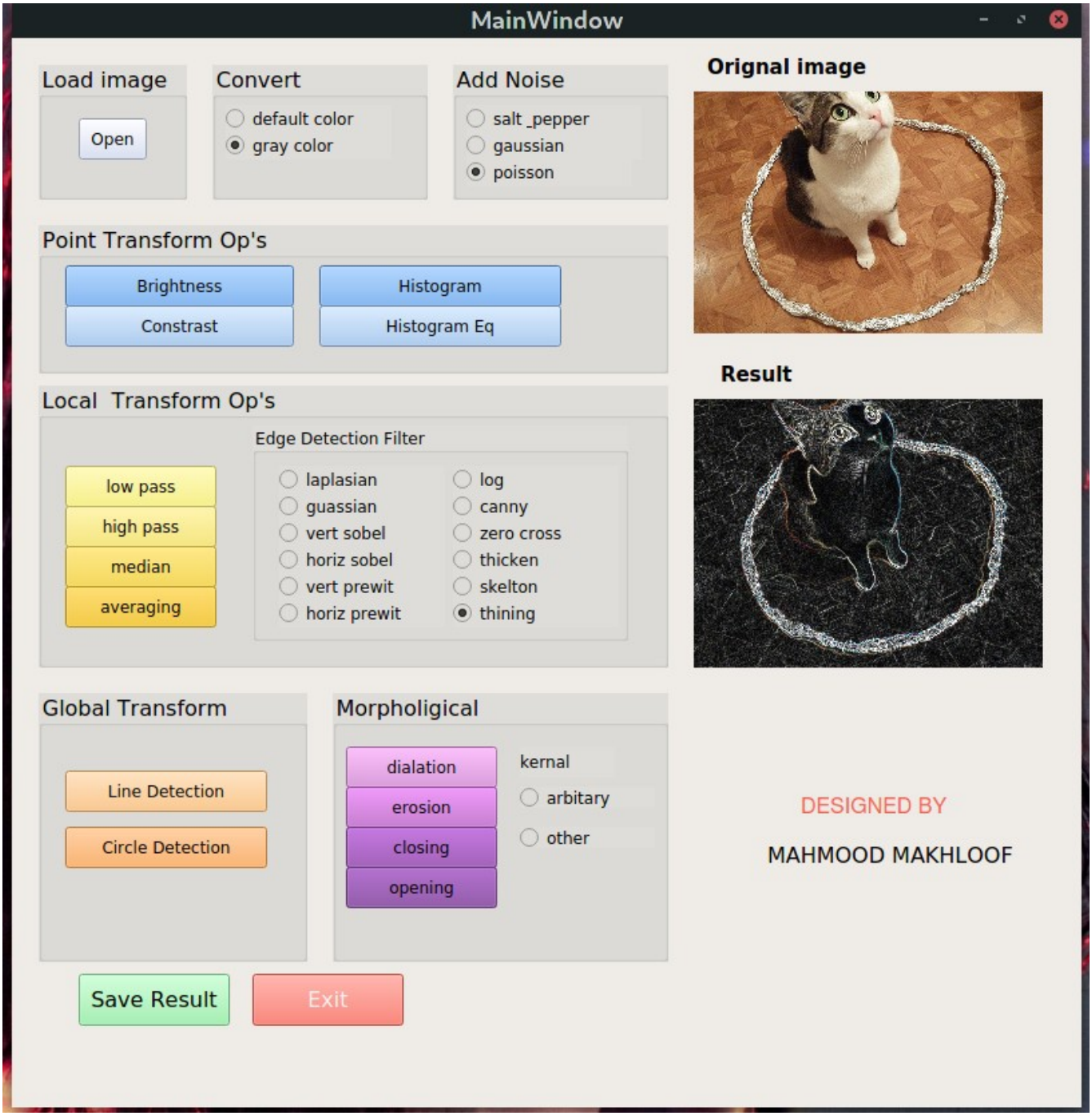
27- thining



28 – line detection

MainWindow

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Brightness | Histogram

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Edge Detection Filter

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- horiz prewit
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- skelton
- thining

Global Transform

Line Detection

Circle Detection

Morpholigical

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kernal

- arbitary
- other

Orignal image

Result

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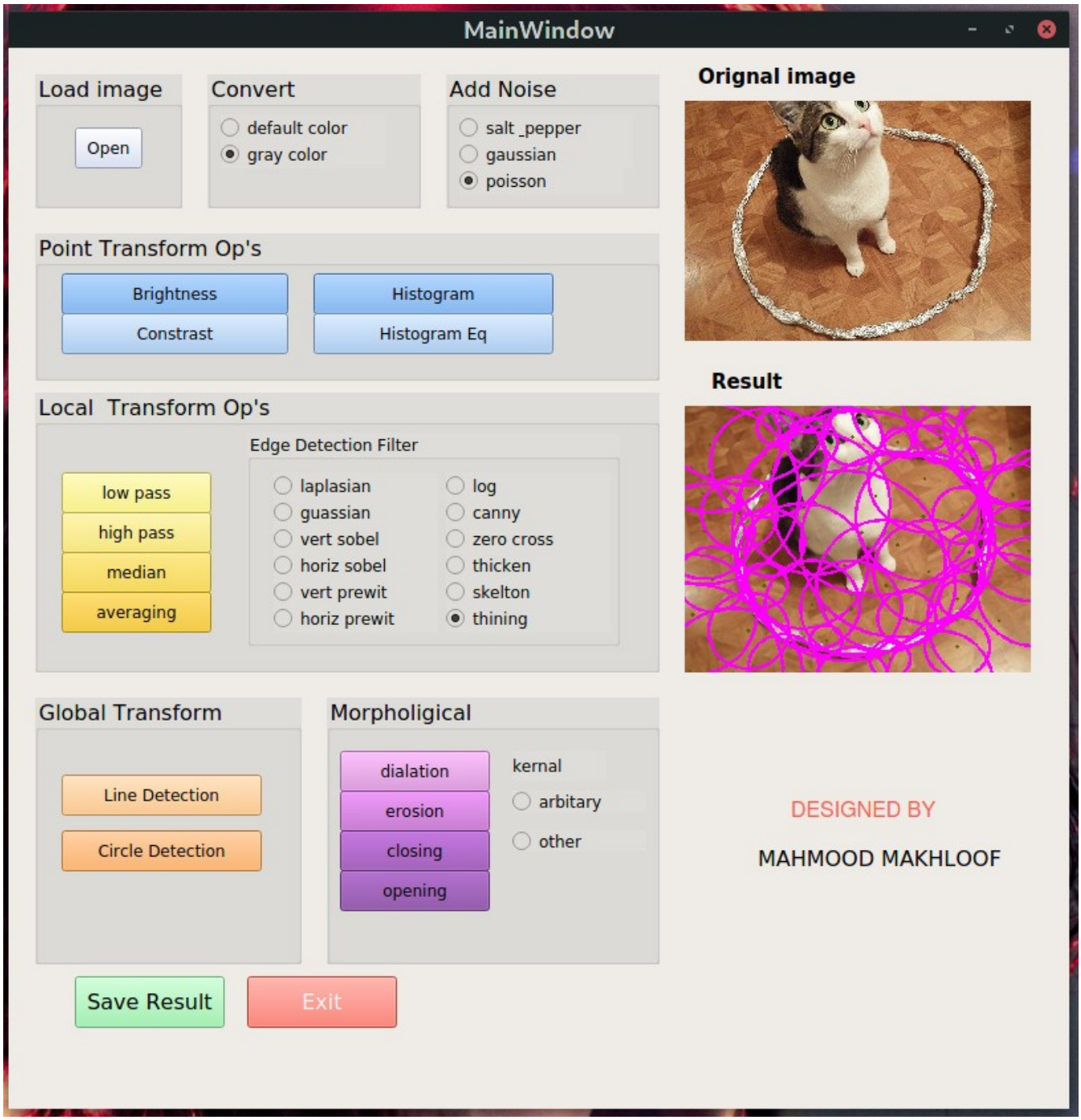
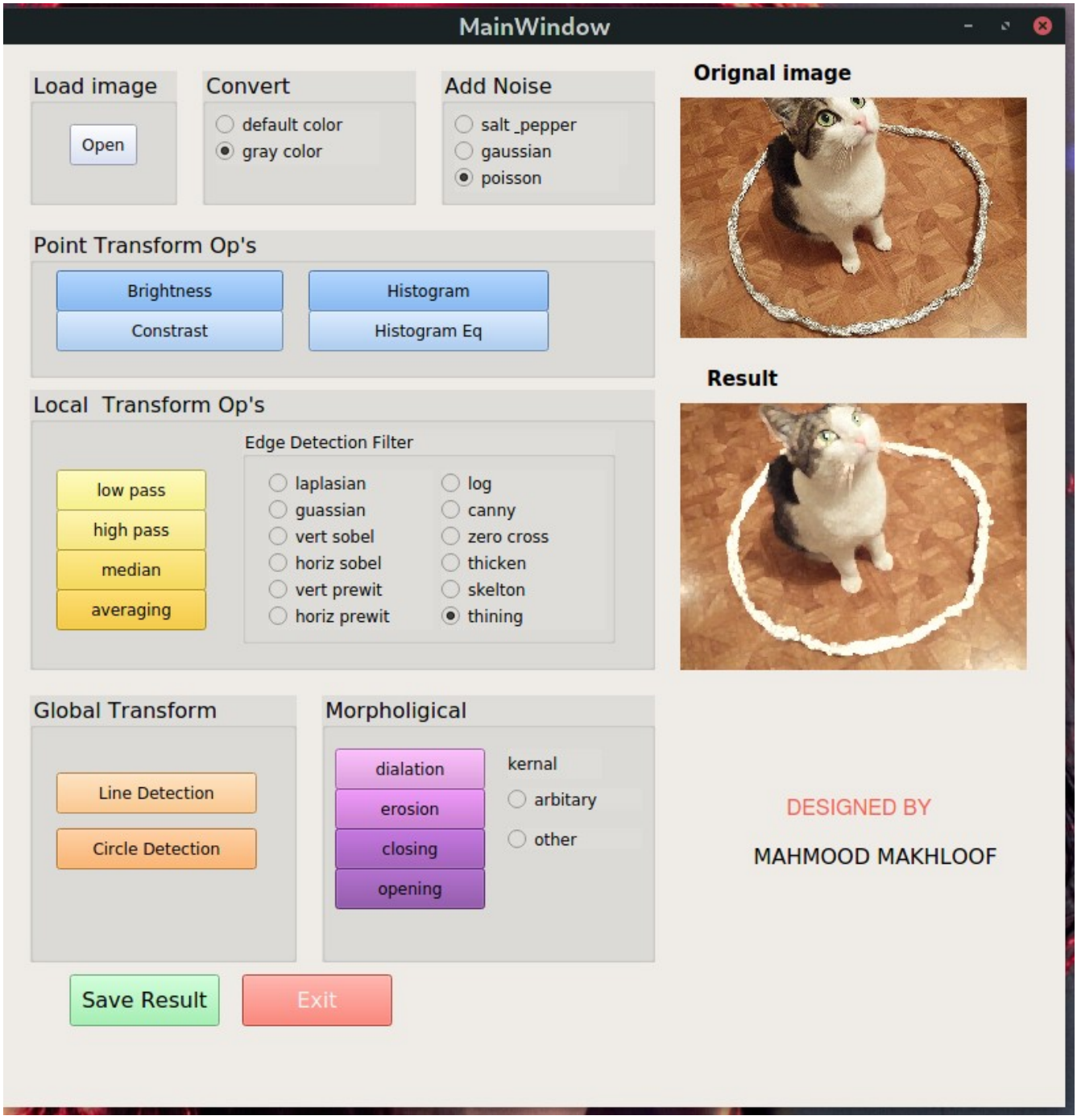
Save Result

Exit

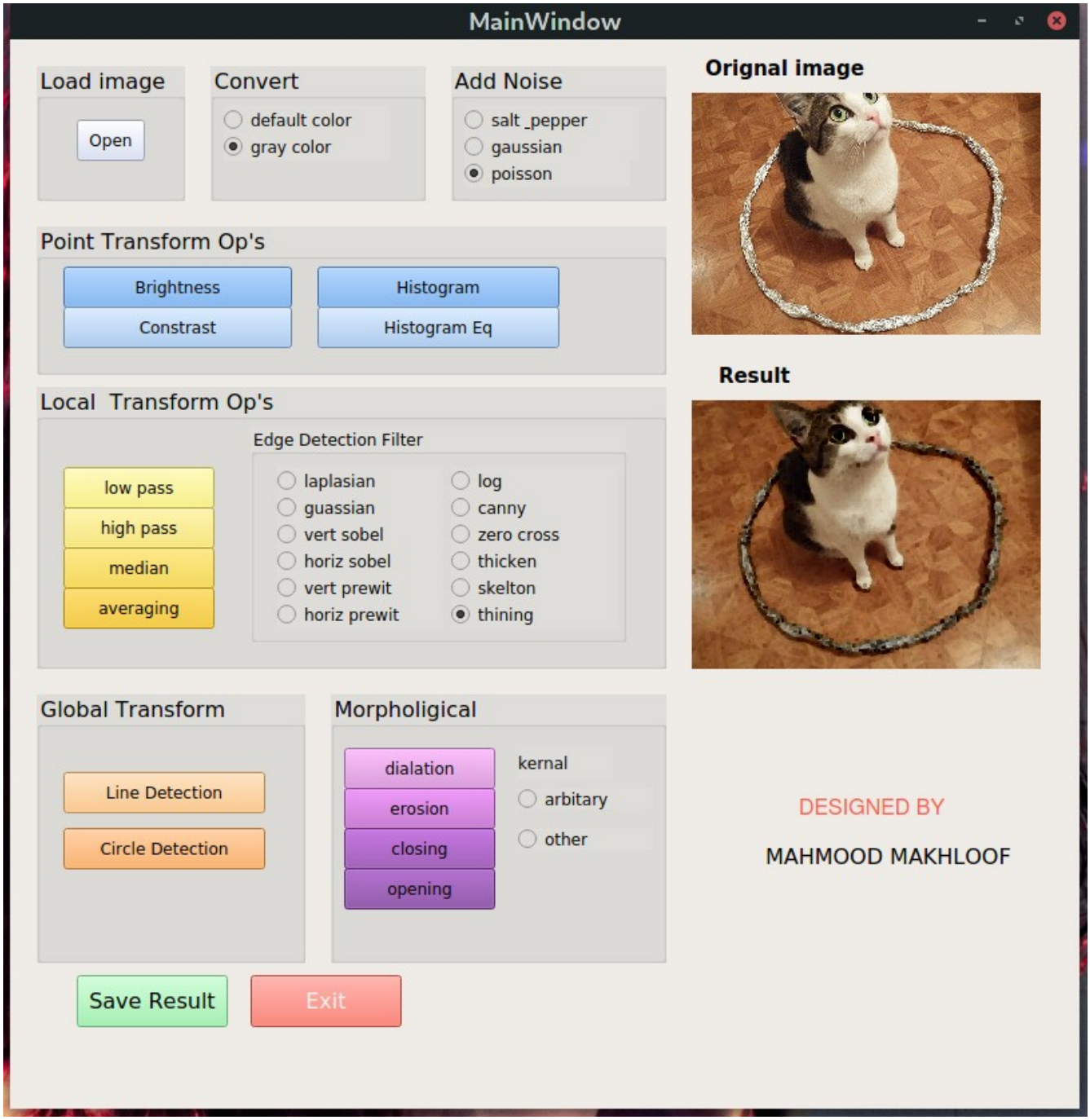
29- circle detection



30 – dialation



31 - erosion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Save Result
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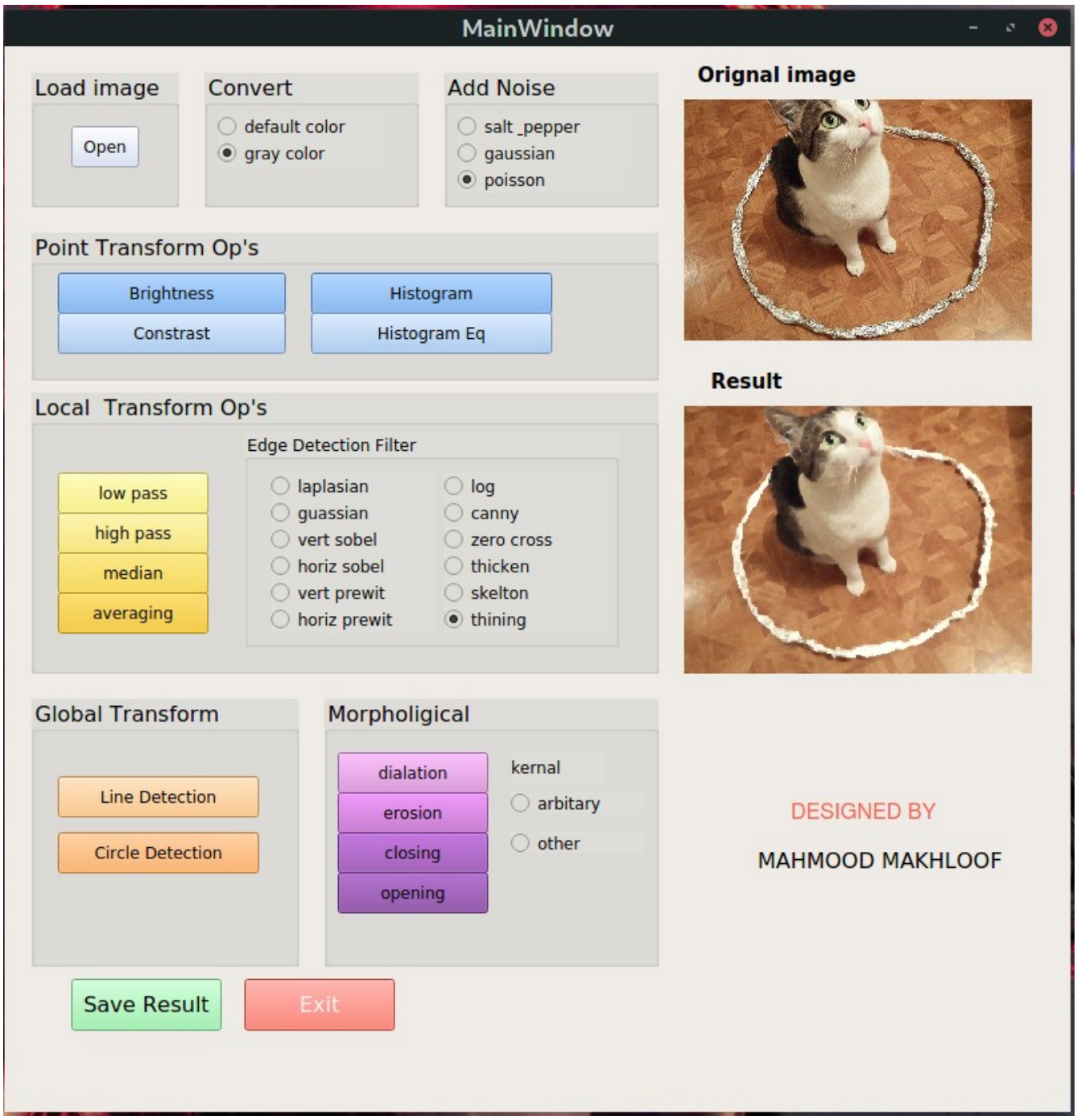
32 - closing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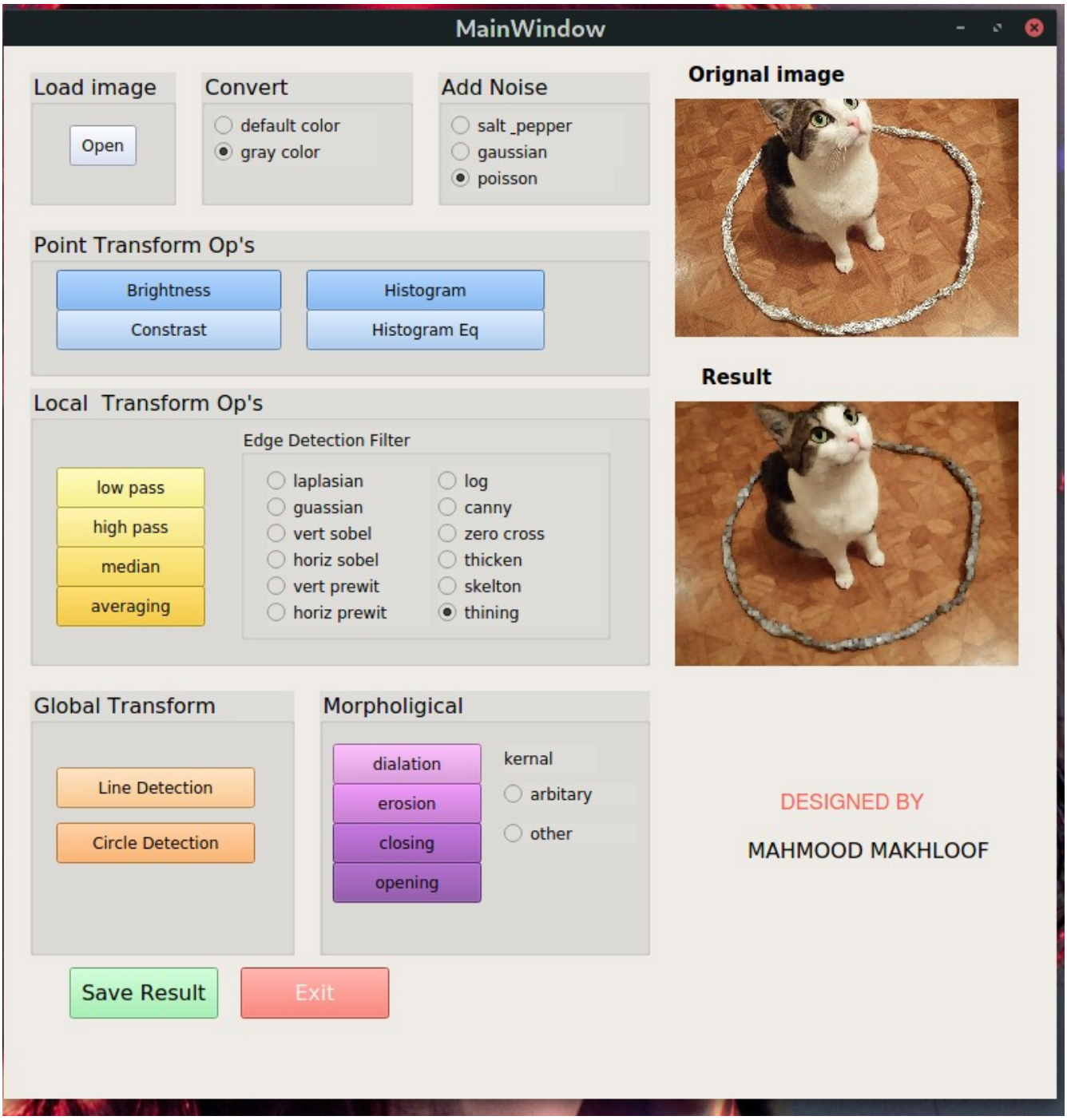
33 - opening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