MCBU

CSE3113/CSE3214 Introduction to Digital Image Processing

Homework 2 Report

FATMA KURTULUŞ – 170316064

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1. Tools

I used GNU Octave, version 5.2.0 for my Project.

2. Problems

I used the picture named “4.tif”. Problems in this picture; The picture has blackening, ripple and salt & pepper noise distortion.

1-Picture with noise

3. Solutions

Which methods did you apply on the image to obtain a similar image to the original one? What parameters did you use? Why? Show your results step by step with screenshots.

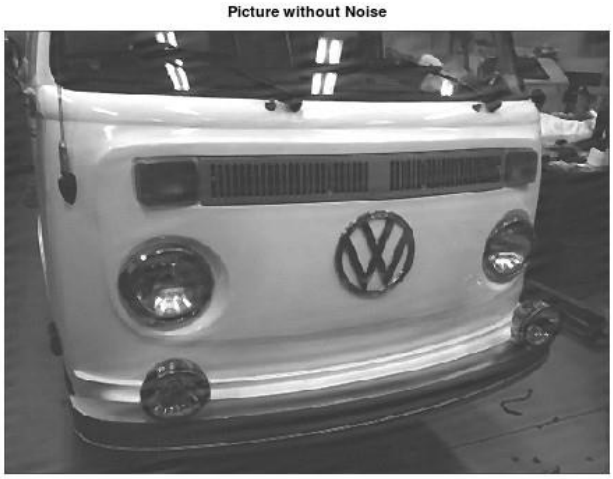
I used this filters for image;

2-Medfilt2 method

3-Imsharpen method with Radius=0.5, amount=3

4-Gaussian Notch filter with standard deviation of 5

5-Geometric mean filter



6-Use imshow(log(1.25+abs(J./0.52)),'Radius',1.21,'Amount',2.5)

(Final version of the picture)

7-Orginal Picture

4. Conclusions and Observations

The thing I had the most difficulty with was removing the waves. After removing the waves, I applied the geometric mean filter because the picture did not look clear.

Finally, I used the method "log (1.25 + abs (J./0.52)), 'Radius', 1.21, 'Amount', 2.5" to remove the blackening in the picture.

5. References

1. https://tr.qwe.wiki/wiki/Geometric_mean_filter
2. https://stackoverflow.com/questions/29235421/find-proper-notch-filter-to-remove-pattern-from-image