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Video Analysis

LV 188.329, WS 2022/23

Filtering–Demo

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<https://de.mathworks.com/academia/tah-portal/technische-universitat-wien-30338656.html>

<http://www.sss.tuwien.ac.at/sss/mla/>

<https://matlab.mathworks.com/>

Filtering with Kernels

- Blue maps are inputs.
- Grey maps are kernels.
- Cyan maps are outputs.
- Noises
 - Gaussian
 - Salt and Pepper
- Filtering
 - Average filtering
 - Bilateral filtering
 - Guided filtering
 - Median filtering

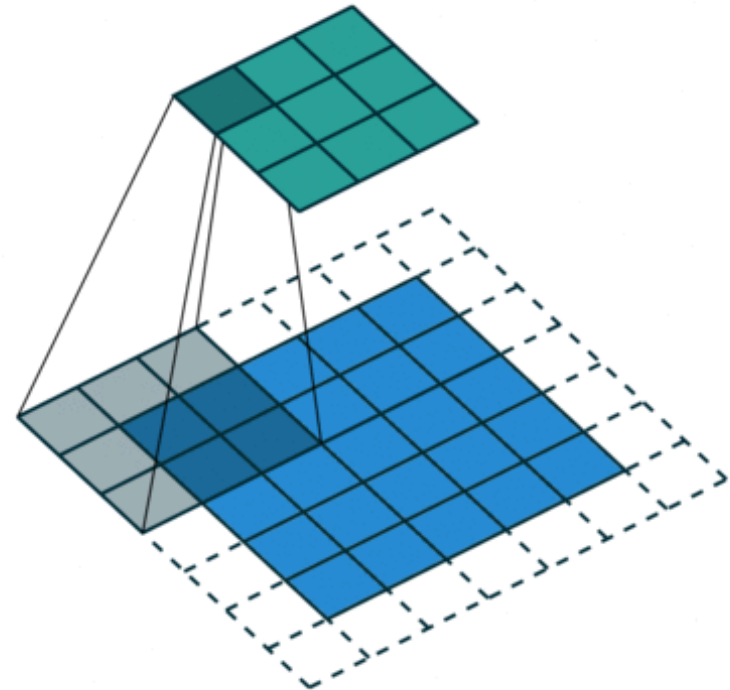


Image from https://github.com/vdumoulin/conv_arithmetic



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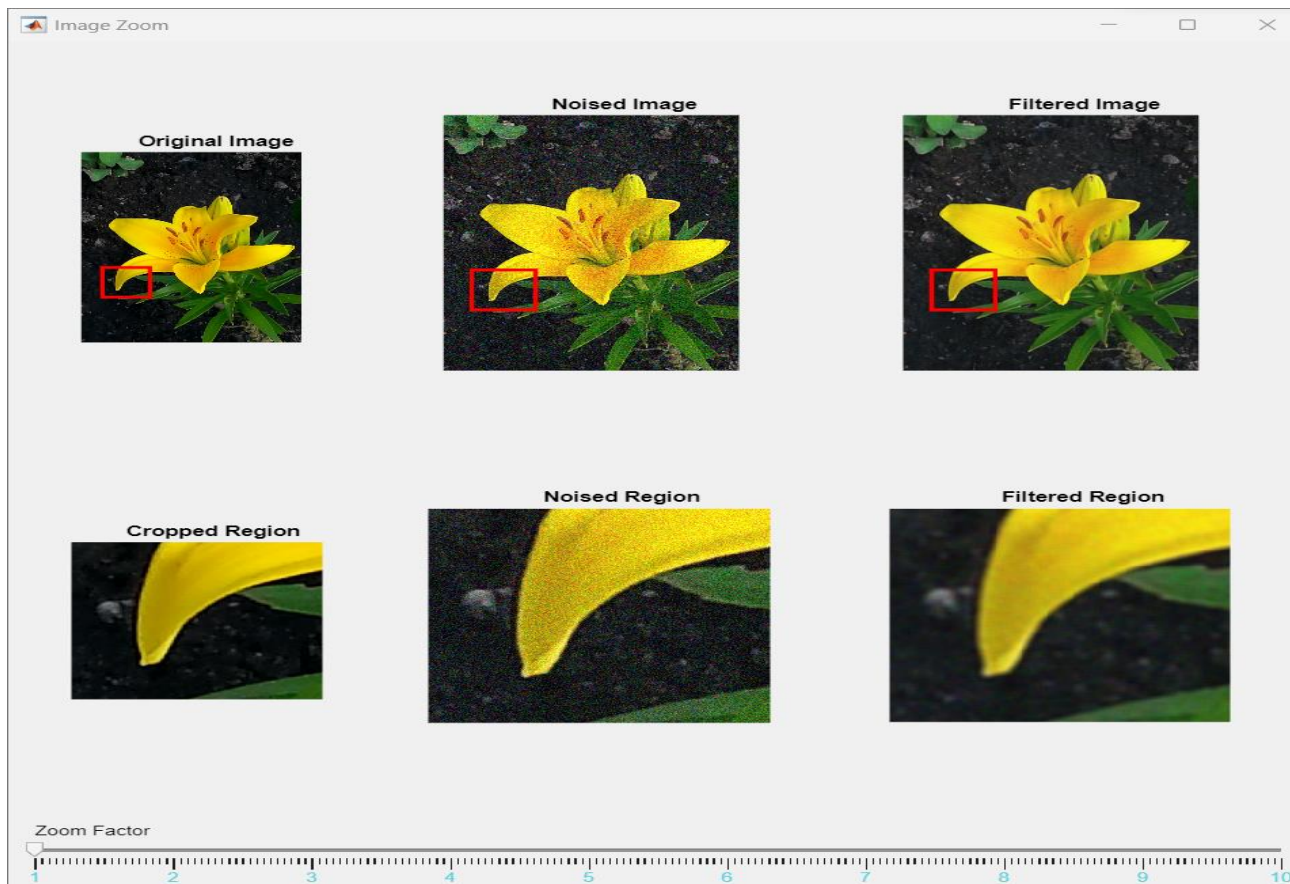
MATLAB Demo

<https://github.com/shriarul5273/VideoAnalysis-Filtering-Demo>



MATLAB GUI

The demo code can be used on local MATLAB and Cloud MATLAB.



References

1. <https://de.mathworks.com/help/images/ref/imnoise.html> (adding Noise to image),
2. <https://de.mathworks.com/help/images/noise-removal.html> (Noise Removal),
3. https://en.wikipedia.org/wiki/Sobel_operator (Sobel operator)
4. <https://pyimagesearch.com/2021/04/28/opencv-smoothing-and-blurring/> (With python)



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Thank you!

