

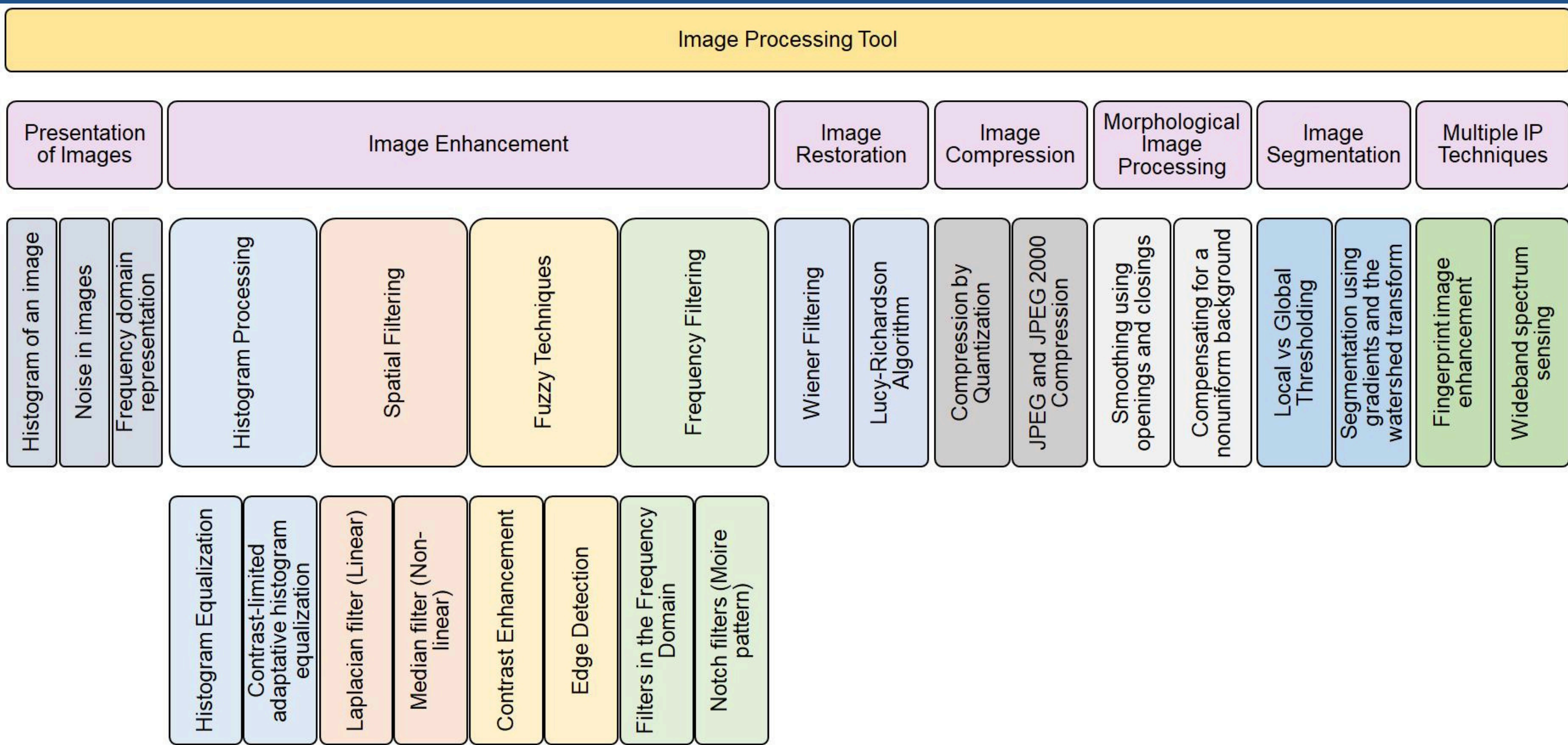
NOVEL EDUCATIONAL TOOL FOR THE FIRST COURSE OF IMAGE PROCESSING: DESIGN, DESCRIPTION, AND EXAMPLES

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Introduction: Challenges in teaching the first image processing course

	Increase students' attention through an interactive learning approach		Keep students' attention and interest		Accomplish students' motivation and skill development		Choose the right programming environment
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✦ ✦ **Design and description:** Structure flowchart of the tool



✦ ✦ **Example:** Histogram of an image

What is the histogram of an image?

Histograms in MATLAB:
The histogram of a digital image shows the distribution of gray-level intensities.
The function in the image processing toolbox is `imhist` with the syntax:
`h = imhist(f, b)`
where `f` is the input image, `h` is its histogram and `b` is the number of bins used in forming the histogram.

Image selection:
Cheetah

Number of bins:
 Default value (256)
 Insert value (< 256):

Restart

Conclusion:
An image with increased dynamic range, i. e., "wider" histogram, will tend to have higher contrast.

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