

Artificial Intelligence and Computer Vision

Instruction no. 1

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2018/2019

1. Read in any color image.
 - a. Transform it to grayscale
 - b. Plot its histogram
 - c. Equalize histogram
 - d. Display the image after transformation
2. Cast the original image, so math operations are possible
 - a. Make a simple math operation on image (multiply by a constant, raise to the power etc.)
 - b. Display modified image
3. Rotate, resize the image.
4. Make some experiments with image thresholding.
5. Crop an interesting part of an image, let's say 32x32 pixel. Store it on a hard drive.
6. Calculate cross correlation between cropped template and full image. How to interpret the result?
7. Detect edges on the image with multiple methods. Compare them.