

Problem 1.

Open the image pic1.jpg and display it with the name pic1. Convert the image to grayscale and display in a separate window to compare with the original image.

Problem 2.

Open the image pic1.jpg and display it with the name pic1. Blur the image using Gaussian blur using 2 different windows sizes: (3, 3) and (11, 11) and display both versions in separate windows to compare with the original image.

Problem 3.

Open the image pic2.jpg and display it with the name pic2. Try to detect the image edges using Canny edge detector and display the result in a separate window. Then run the edge detector on a blurred version of an image (use a window size of your choice) and display the result in a different window to compare.

Problem 4.

Open the image pic2.jpg and display it with the name pic2. Resize the image to have 2 times bigger width and the same height as the original image, use INTER_AREA interpolation. Then resize the original image to have 2 times smaller height and the same width as the original image, use INTER_CUBIC interpolation. Display both versions in separate windows.

Problem 5.

Open the image pic2.jpg and display it with the name pic2. Translate the image to go down by 200 pixels and to the right by 50 pixels. Then rotate the image around its center by 50 degrees. Then flip the resulting image both vertically and horizontally. Display the result after each action in a separate window.

Problem 6.

Open the image pic3.jpg and display it with the name pic3. Find the edges of the image using Canny edge detector and then try to find its contours with parameters of your choice. Then convert the original image to grayscale and try to find the contours on a blurred version of the grayscale of the original image. Display the 2 results in separate windows to compare.