

# CHEAT SHEET FOR IMAGE PROCESSING

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cv2.imread()	loads an image from the specified file
cv2.namedWindow()	used to create an empty window with a suitable name and size to display images
cv2.imshow()	used to create a window and set the image with a given window name
cv2.waitKey()	for blocking the script ( wait for a key press )
cv2.destroyAllWindows()	for destroying the displayed image
IMAGE_WRITE_JPEG_QUALITY	used to set the quality of the image (compression size)
cv2.cvtColor()	To convert the image to a different color space
cv2.calcHist()	calculate the histogram of the image as a 1D array
cv2.equalizeHist()	equalize the histogram of the image to increase the contrast
costume func : MSE(image1, image2)	<pre># Calculate the squared difference between the two images squared_diff = (image1 - image2) ** 2 # Calculate the mean of the squared differences mse = np.mean(squared_diff)</pre>
gaussianNoise	<code>np.random.randn(image.shape[0], image.shape[1]) * 2</code>
saltPepperNoise	<code>np.random.choice([0, 255], size=image.shape, p=[0.95, 0.05])</code>
cv2.add(img1,img2)	this function is used to combine to images ( ex : noise + original image )



meanFilter(image,kernel_size)	<pre># Create a kernel with ones and divide each element by the kernelsize kernel = np.ones((kernel_size, kernel_size), np.float32) /             (kernel_size ** 2) # Apply the kernel to the image using convolution filtered_image = cv2.filter2D(image, -1, kernel)</pre>
medianFilter(image, kernel_size)	<pre># Apply the median filter to the image filtered_image = cv2.medianBlur(image, kernel_size)</pre>
gaussianFilter(image, kernel_size, sigma)	<pre># Apply the Gaussian filter to the image filtered_image = cv2.GaussianBlur(image, (kernel_size, kernel_size), sigma)</pre>