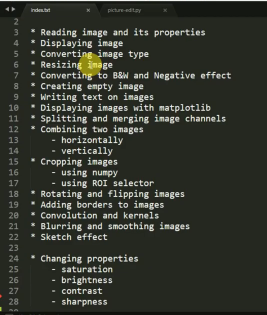
Content



Read write and show properties of image and other

#import Library  
import cv2  
  
#Read Image  
img = cv2.imread('pic.jpg')  
#BGR Format Colors  
print(img)  
#Pixel Size  
print(img.shape)  
#Image data type un signed number  
print(img.dtype)  
#to see image  
cv2.imshow('Sample',img)  
#Convert or save into new type  
cv2.imwrite('test.png',img)  
#Open till i cross or press ker value mean seconds  
cv2.waitKey()  
#if multiple windows open on cross one all close  
cv2.destroyAllWindows()

Resize Convert to Gray Scale and Negative

#import Library  
import cv2  
  
#Read Image  
img = cv2.imread('pic.jpg')  
#Resize Image  
resized=cv2.resize(img,(300,300))  
cv2.imshow('Resized',resized)  
#Black WHite zero or 255 but in gray it very with one channel  
gray=cv2.cvtColor(resized,cv2.COLOR\_BGR2GRAY)  
print(gray)  
print(gray.shape)  
cv2.imshow('Gray',gray)  
#Negative Image  
negative=1-resized  
cv2.imshow('Negative',negative)  
#Open till i cross or press ker value mean seconds  
cv2.waitKey()  
#if multiple windows open on cross one all close  
cv2.destroyAllWindows()

Make you own image with color and text

#import Library  
import cv2  
#import numoy  
import numpy as np  
  
#Create Black color Image  
arr=np.zeros((300,300,3),dtype=np.uint8)  
#It make White image  
arr.fill(255)  
#slice to make different 3 color Image BGR  
arr[:]=[137,167,255]  
#Add text on Image  
cv2.putText(arr,'Hello',(150,150),cv2.FONT\_ITALIC,2,(255,0,0))  
cv2.imshow('Black',arr)  
#Open till i cross or press ker value mean seconds  
cv2.waitKey()  
#if multiple windows open on cross one all close  
cv2.destroyAllWindows()

With Math plotLib openimage and See color combinations

#import Library  
import cv2  
#import numoy  
import numpy as np  
#Import Matplotlib  
import matplotlib.pyplot as plt  
  
#Create Black color Image  
arr=np.zeros((300,300,3),dtype=np.uint8)  
#It make White image  
arr.fill(255)  
#slice to make different 3 color Image BGR  
arr[:]=[137,167,255]  
#Add text on Image  
matimg=cv2.putText(arr,'Hello',(150,150),cv2.FONT\_ITALIC,2,(255,0,0))  
cv2.imshow('Black',arr)  
#using Matplotlib img display  
rgb=cv2.cvtColor(matimg,cv2.COLOR\_BGR2RGB)  
#plt.imshow(matimg)  
#plt.show()  
plt.imshow(rgb)  
plt.show()  
#Open till i cross or press ker value mean seconds  
cv2.waitKey()  
#if multiple windows open on cross one all close  
cv2.destroyAllWindows()

Convert to RGB for sample image

#import Library  
import cv2  
#import numoy  
import numpy as np  
#Import Matplotlib  
import matplotlib.pyplot as plt  
  
#Read Image with resizing  
img = cv2.imread('pic.jpg')  
resized=cv2.resize(img,(300,300))  
cv2.imshow('Resized',resized)  
#using Matplotlib img display with RGB Correct value  
rgb=cv2.cvtColor(img,cv2.COLOR\_BGR2RGB)  
  
#plt.imshow(resized)   
plt.imshow(rgb)  
plt.show()  
#Open till i cross or press ker value mean seconds  
cv2.waitKey()  
#if multiple windows open on cross one all close  
cv2.destroyAllWindows()

RGB Split to show different colors

#import Library  
import cv2  
#import numoy  
import numpy as np  
#Import Matplotlib  
import matplotlib.pyplot as plt  
  
#Read Image with resizing  
img = cv2.imread('pic.jpg')  
resized=cv2.resize(img,(300,300))  
cv2.imshow('Resized',resized)  
#Imae split by color or combine for conversion  
b, g, r=cv2.split(resized)  
rgb=cv2.merge([r,g,b])  
  
#plt.imshow(resized)  
plt.imshow(rgb)  
plt.show()  
#Open till i cross or press ker value mean seconds  
cv2.waitKey()  
#if multiple windows open on cross one all close  
cv2.destroyAllWindows()  
#Extra way of splitting using numpy  
#b=resized[:,:,0]  
#g=resized[:,:,1]  
#r=resized[:,:,2]

Vertical Horizontal Combine two image

#import Library  
import cv2  
#import numoy  
import numpy as np  
#Import Matplotlib  
import matplotlib.pyplot as plt  
  
#Read Watch Image with resizing  
img1 = cv2.imread('watch.jpg')  
resized1=cv2.resize(img1,(300,300))  
cv2.imshow('Watch',resized1)  
#Read Orange Image with resizing  
img2 = cv2.imread('orange.jpg')  
resized2=cv2.resize(img2,(300,300))  
cv2.imshow('Orange',resized2)  
#Comibine by Horizontal  
horiz=cv2.hconcat([resized1,resized2])  
cv2.imshow('Hor Comb',horiz)  
#Comibine by Vertical  
vert=cv2.vconcat([resized1,resized2])  
cv2.imshow('Vert Comb',vert)  
#Open till i cross or press ker value mean seconds  
cv2.waitKey()  
#if multiple windows open on cross one all close  
cv2.destroyAllWindows()

Cropping image with join

#import Library  
import cv2  
#import numoy  
import numpy as np  
#Import Matplotlib  
import matplotlib.pyplot as plt  
  
#Read Watch Image with resizing  
img1 = cv2.imread('pic.jpg')  
resized1=cv2.resize(img1,(300,300))  
b, g, r=cv2.split(resized1)  
rgb=cv2.merge([r,g,b])  
plt.imshow(rgb)  
plt.show()  
#Cropped by coordinates y1,y2 and x1,x2  
crop=resized1[190:250,35:90]  
cv2.imshow('Dog',crop)  
dog=crop  
#using Region Of Interset Method ROI  
r=cv2.selectROI(resized1)  
print(r)  
crop2=resized1[r[1]:r[1]+r[3],r[0]:r[0]+r[2]]  
cv2.imshow('Horse',crop2)  
horse=crop2  
#Resized and join both  
dog=cv2.resize(dog,(150,150))  
horse=cv2.resize(horse,(150,150))  
horiz=cv2.hconcat([dog,horse])  
cv2.imshow('Dog Horse',horiz)  
cv2.imwrite('CropJoin.jpg',horiz)  
  
#Open till i cross or press ker value mean seconds  
cv2.waitKey()  
#if multiple windows open on cross one all close  
cv2.destroyAllWindows()

Rotation and Flip of Image

#import Library  
import cv2  
#import numoy  
import numpy as np  
#Import Matplotlib  
import matplotlib.pyplot as plt  
  
#Read Watch Image with resizing  
img1 = cv2.imread('pic.jpg')  
resized1=cv2.resize(img1,(300,300))  
cv2.imshow('Sample',resized1)  
  
#Rotation with angle  
angle=cv2.ROTATE\_90\_CLOCKWISE  
rotated=cv2.rotate(resized1,angle)  
cv2.imshow('Rotated',rotated)  
  
#FLipped Image  
flipped=cv2.flip(resized1,2)  
cv2.imshow('Flipped',flipped)  
  
#Open till i cross or press ker value mean seconds  
cv2.waitKey()  
#if multiple windows open on cross one all close  
cv2.destroyAllWindows()

Border aroung image

#import Library  
import cv2  
#import numoy  
import numpy as np  
#Import Matplotlib  
import matplotlib.pyplot as plt  
  
#Read Watch Image with resizing  
img1 = cv2.imread('pic.jpg')  
resized1=cv2.resize(img1,(300,300))  
cv2.imshow('Sample',resized1)  
  
#Border Image  
border=cv2.copyMakeBorder(resized1,10,10,10,10,cv2.BORDER\_CONSTANT,value=(0,255,0))  
cv2.imshow('Border',border)  
  
#Open till i cross or press ker value mean seconds  
cv2.waitKey()  
#if multiple windows open on cross one all close  
cv2.destroyAllWindows()

Image Blurr

#import Library  
import cv2  
#import numoy  
import numpy as np  
#Import Matplotlib  
import matplotlib.pyplot as plt  
  
#Read Watch Image with resizing  
img1 = cv2.imread('pic.jpg')  
resized1=cv2.resize(img1,(300,300))  
cv2.imshow('Sample',resized1)  
  
#Image Blur  
blurr=cv2.blur(resized1,(5,5))  
cv2.imshow('Blur',blurr)  
  
#Open till i cross or press ker value mean seconds  
cv2.waitKey()  
#if multiple windows open on cross one all close  
cv2.destroyAllWindows()

PencilEffect

#import Library  
import cv2  
#import numoy  
import numpy as np  
#Import Matplotlib  
import matplotlib.pyplot as plt  
  
#Read Watch Image with resizing  
img1 = cv2.imread('pic.jpg')  
resized1=cv2.resize(img1,(300,300))  
cv2.imshow('Sample',resized1)  
  
#Pencil Effect sigma effect sigma r shade effect  
pencil, colored=cv2.pencilSketch(resized1, 200,0.1,shade\_factor=0.1)  
cv2.imshow('Pencil',pencil)  
cv2.imshow('Color pencil',colored)  
  
#Open till i cross or press ker value mean seconds  
cv2.waitKey()  
#if multiple windows open on cross one all close  
cv2.destroyAllWindows()

Edge Detetcion

#import Library  
import cv2  
#import numoy  
import numpy as np  
#Import Matplotlib  
import matplotlib.pyplot as plt  
  
#Read Watch Image with resizing  
img1 = cv2.imread('pic.jpg')  
resized1=cv2.resize(img1,(300,300))  
cv2.imshow('Sample',resized1)  
  
#Edge detetcionon color image  
edges = cv2.Canny(resized1, 100,200)  
cv2.imshow('Edge Detect',edges)  
  
  
#Open till i cross or press ker value mean seconds  
cv2.waitKey()  
#if multiple windows open on cross one all close  
cv2.destroyAllWindows()

Using PIL for enhancement

from PIL import Image, ImageEnhance  
  
img=Image.open('pic.jpg')  
#Brightness  
enhanced\_obj=ImageEnhance.Brightness(img)  
enhanced\_obj.enhance(0.5).show()

from PIL import Image, ImageEnhance  
  
img=Image.open('pic.jpg')  
#Contrast  
enhanced\_obj=ImageEnhance.Contrast(img)  
enhanced\_obj.enhance(2).show()

from PIL import Image, ImageEnhance  
  
img=Image.open('pic.jpg')  
#sharpnessforeground mid grounbackground  
enhanced\_obj=ImageEnhance.Sharpness(img)  
enhanced\_obj.enhance(0.5).show()

from PIL import Image, ImageEnhance  
  
img=Image.open('pic.jpg')  
#sharpnessforeground mid grounbackground  
enhanced\_obj=ImageEnhance.Sharpness(img)  
enhanced\_obj.enhance(0.5).show()  
enhanced\_obj.enhance(0.5).save('test1.jpg')

https://www.youtube.com/watch?v=dkp4wUhCwR4&t=930s&ab\_channel=PyMoondra