IMAGE SHARPENING

import cv2

import sys

import numpy as np

#read input image

image = cv2.imread("C:/Users/student/Desktop/Grapes-Blog-Image.jpg")

#check is input image exists

if image is None:

    print("can not find image")

    sys.exit()

#define sharpening kernel

sharpeningKernel = np.array(([0, -1, 0],[-1, 5, -1],[0, -1, 0]), dtype="int")

#filter2D is used to perform the convolution.

# The third parameter (depth) is set to -1 which means the bit-depth of the output image is the

# same as the input image. So if the input image is of type CV\_8UC3, the output image will also be of the same type

output = cv2.filter2D(image, -1, sharpeningKernel)

#create windows to display images

cv2.namedWindow("image", cv2.WINDOW\_AUTOSIZE)

cv2.namedWindow("output", cv2.WINDOW\_AUTOSIZE)

#display images

cv2.imshow("image", image)

cv2.imshow("output", output)

#press esc to exit the program

cv2.waitKey(0)

#close all the opened windows

cv2.destroyAllWindows()

OUTPUT

|  |  |
| --- | --- |
| ORIGINAL IMAGE | SHARPEN IMAGE |