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import cv2

import numpy as np


# Load the original color image

image = cv2.imread(r"C:\Users\SAIL\Downloads\CV\alovera.jpg") # Replace with your image file

if image is None:

    print("Error: Image not found or path is incorrect.")

    exit()


# Define the structuring element (kernel)

kernel = np.ones((5, 5), np.uint8)


# Split the image into Blue, Green, and Red channels

b, g, r = cv2.split(image)


# Apply Black-hat morphological operation on each channel

b_blackhat = cv2.morphologyEx(b, cv2.MORPH_BLACKHAT, kernel)
g_blackhat = cv2.morphologyEx(g, cv2.MORPH_BLACKHAT, kernel)
r_blackhat = cv2.morphologyEx(r, cv2.MORPH_BLACKHAT, kernel)


# Merge channels back into a color image

blackhat_color = cv2.merge((b_blackhat, g_blackhat, r_blackhat))


# Display results

cv2.imshow('Original Color Image', image)

cv2.imshow('Black-hat (Color)', blackhat_color)
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`cv2.waitKey(0)`

`cv2.destroyAllWindows()`

