

Group 1

https://colab.research.google.com/drive/1f8-qXSlmszge9BX6R2XiKdVAKfXWg6lt#scrollTo=YH3Amjo2y73W

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Name - TANISHQ KOLHATKAR Reg No.- 21MIM10025

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```
import cv2
import matplotlib.pyplot as plt
```


Image reading and Preprocessing

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```
img = cv2.imread('/content/Virat.jpg')
imgRGB = cv2.cvtColor(img, cv2.COLOR_BGR2RGB)
img_gray = cv2.cvtColor(imgRGB, cv2.COLOR_RGB2GRAY)
img_blur = cv2.GaussianBlur(img_gray,(3,3),0)
plt.title("Original Image")
plt.imshow(imgRGB)
```

<matplotlib.image.AxesImage at 0x7c61e262aa40>

Original Image



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Colab

Vityarthi_Module_3_Session_2_Canny_Edge_Detector.ipynb

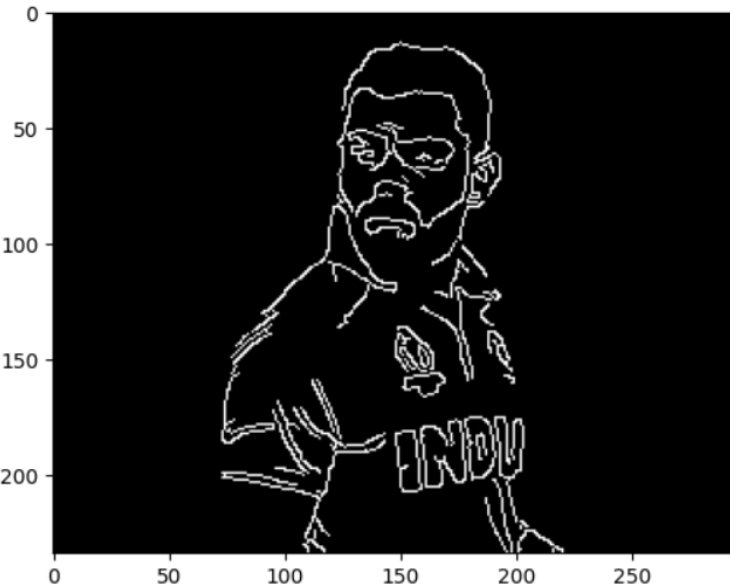
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0 50 100 150 200 250

edges = cv2.Canny(image=img_blur,threshold1=100,threshold2=200)
edges = cv2.cvtColor(edges,cv2.COLOR_BGR2RGB)
plt.imshow(edges)

<matplotlib.image.AxesImage at 0x7c61e0418d60>



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<matplotlib.image.AxesImage at 0x7c61e0418d60>

0 50 100 150 200 250

0 50 100 150 200 250

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Snipping Tool

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```
def live_canny_edge_detector():
    # Open the webcam (you may need to adjust the parameter, 0 or 1, depending on your webcam setup)
    cap = cv2.VideoCapture(0)

    while True:
        # Read a frame from the webcam
        ret, frame = cap.read()

        # If reading frame was unsuccessful, break the loop
        if not ret:
            break

        # Convert the frame to grayscale
        gray_frame = cv2.cvtColor(frame, cv2.COLOR_BGR2GRAY)

        # Apply Canny edge detection
        edges = cv2.Canny(gray_frame, threshold1=100, threshold2=200)

        # Display the original frame and the Canny edges
        cv2.imshow('Webcam', frame)
        cv2.imshow('Canny Edges', edges)

        # If 'q' key is pressed, exit the loop
        if cv2.waitKey(1) & 0xFF == ord('q'):
            break

    # Release the webcam and close all windows
    cap.release()
    cv2.destroyAllWindows()

# Call the function to start the live Canny edge detector
live_canny_edge_detector()
```

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 Battery saver

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