13. Perform Perspective Transformation on the Video.

Program

import cv2  
import numpy as np  
  
video\_path = "C:/Users/sidda/OneDrive/Desktop/py/pexels-shah-jahan-5446310 (1080p).mp4"  
  
  
imgPts = np.float32([[114, 151], [605, 89], [72, 420], [637, 420]])  
objPoints = np.float32([[0, 0], [420, 0], [0, 637], [420, 637]])  
  
matrix = cv2.getPerspectiveTransform(imgPts, objPoints)  
  
cap = cv2.VideoCapture(video\_path) # Open the video capture  
  
frame\_width = int(cap.get(3)) # Get the frame width  
frame\_height = int(cap.get(4)) # Get the frame height  
  
output\_path = "perspective\_transformed\_video.mp4"  
fourcc = cv2.VideoWriter\_fourcc(\*"XVID")  
out = cv2.VideoWriter(output\_path, fourcc, 30, (frame\_width, frame\_height))  
  
while True:  
 ret, frame = cap.read()  
 if not ret:  
 break  
  
 result = cv2.warpPerspective(frame, matrix, (frame\_width, frame\_height))  
  
 out.write(result)  
  
 cv2.imshow('Original Frame', frame)  
 cv2.imshow('Perspective Transformed Frame', result)  
  
 key = cv2.waitKey(1)  
 if key == 27:  
 break  
  
cap.release()  
out.release()  
cv2.destroyAllWindows()

output

