LAMPIRAN

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import cv2 #Import CV2
import numpy as np #Import Numpy
from adafruit_servokit import ServoKit #Import Servo driver library
kit = ServoKit(channels=16) #Define instance of Servo library
kit.servo[0].set_pulse_width_range(600, 2610)   #Set Minimum & Maximum positon of X axis Servo
kit.servo[1].set_pulse_width_range(1102, 2170)    #Set Minimum & Maximum positon of Y axis Servo
cap = cv2.VideoCapture(0) #Catpure video from camera
Ht = 380 #Defined Height of frame
Wd = 640 #Defined Width of Frame
cap.set(3, Wd) #Set frame Width
cap.set(4, Ht) #Set frame height
_, frame = cap.read() #Store captured frame of camera to variable "frame"
rows, cols, ch = frame.shape #Get frame size
x_medium = int(cols / 2) #Initialize horizontal position
y_medium = int(rows / 2) #Initialize vertical positon

x_center = int(cols / 2) #Initialize Horizontal center position
y_center = int(rows / 2) #Initialize Vertical center position
x_position = 90 # centre posito of servo
y_position = 90 # centre posito of servo
x_band = 50
y_band = 50


#Loop
while True:
    _, frame1 = cap.read() #Store Video snap in varialble "frame1"
    frame1 = cv2.flip(frame1,-1) # Flip image vertically
    frame2 = cv2.flip(frame1,-1) # flip image vertically
    hsv_frame2 = cv2.cvtColor(frame2, cv2.COLOR_BGR2HSV)
    xpos=x_medium-320
    ypos=-y_medium+190

    textX='x={}'.format(xpos)
    textY='y={}'.format(ypos)

    #blurred_frame = cv2.GaussianBlur(frame1, (5, 5), 0)
#Green Colour
    low_green = np.array([60,200,200]) #low HSV value for green objects
    high_green = np.array([120,255,255]) # High HSV value for Red objects
    green_mask = cv2.inRange(hsv_frame2,low_green,high_green) # Apply Masking to image using low & High green masking value
    red = cv2.bitwise_and(frame2,frame2,mask=green_mask) # Anding of original frame &
#Contors
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    contours_green, _ = cv2.findContours(green_mask, cv2.RETR_TREE, cv2.CHAIN_APPROX_NONE) # Findig Contours
    contours = sorted(contours_green, key=lambda x:cv2.contourArea(x), reverse=True) # Arrange Contours in Assending
    for cnt in contours: # Draw rectangle on First contors on image
        (x,y,w,h) = cv2.boundingRect(cnt)
        cv2.rectangle(frame2, (x , y) , (x + w, y + h) , (0, 255, 0), 2) # Getting Position of rectangle & line colour & thickness
        break # Break loop to draw only one rectangle. if comment we get all red object rectangle
    for cnt in contours:
        (x,y,w,h) = cv2.boundingRect(cnt)
        x_medium = int((x + x + w) / 2) # Checking horizontal center of green object & save to variable
        y_medium = int((y + y + h) / 2) # Checking Vertical center of green object & save to variable
        break
    cv2.putText(frame2, textX, (x_medium, y_medium-30), cv2.FONT_HERSHEY_SIMPLEX, 1, (255, 0, 0), 2)
    cv2.putText(frame2, textY, (x_medium, y_medium), cv2.FONT_HERSHEY_SIMPLEX, 1, (0, 0, 255), 2)
    cv2.line(frame2, (x_medium, 0), (x_medium, Ht), (0, 255, 0), 2) #Draw horizontal centre line of green object
    cv2.line(frame2, (0, y_medium), (Wd, y_medium), (0, 255, 0), 2) #Draw Vertical centre line of green object
    cv2.imshow("IN Frame", frame2) #Printing frame with rectangle &  lines

    # Move Horizontal Servo servo motor
    if x_medium < x_center - x_band:
        y_position += 1
    elif x_medium > x_center + x_band:
        y_position -= 1
    # Move Vertiacl Servo servo motor
    if y_medium < y_center - y_band:
        x_position -= 1
    elif y_medium > y_center + y_band:
        x_position += 1
    print("x =", xpos,"y=",ypos)
    if x_position >= 180:
        x_position = 180
    elif x_position <+ 0:
        x_position = 0
    else:
        x_position = x_position
    if y_position >= 180:
        y_position = 180
    elif y_position <= 0:
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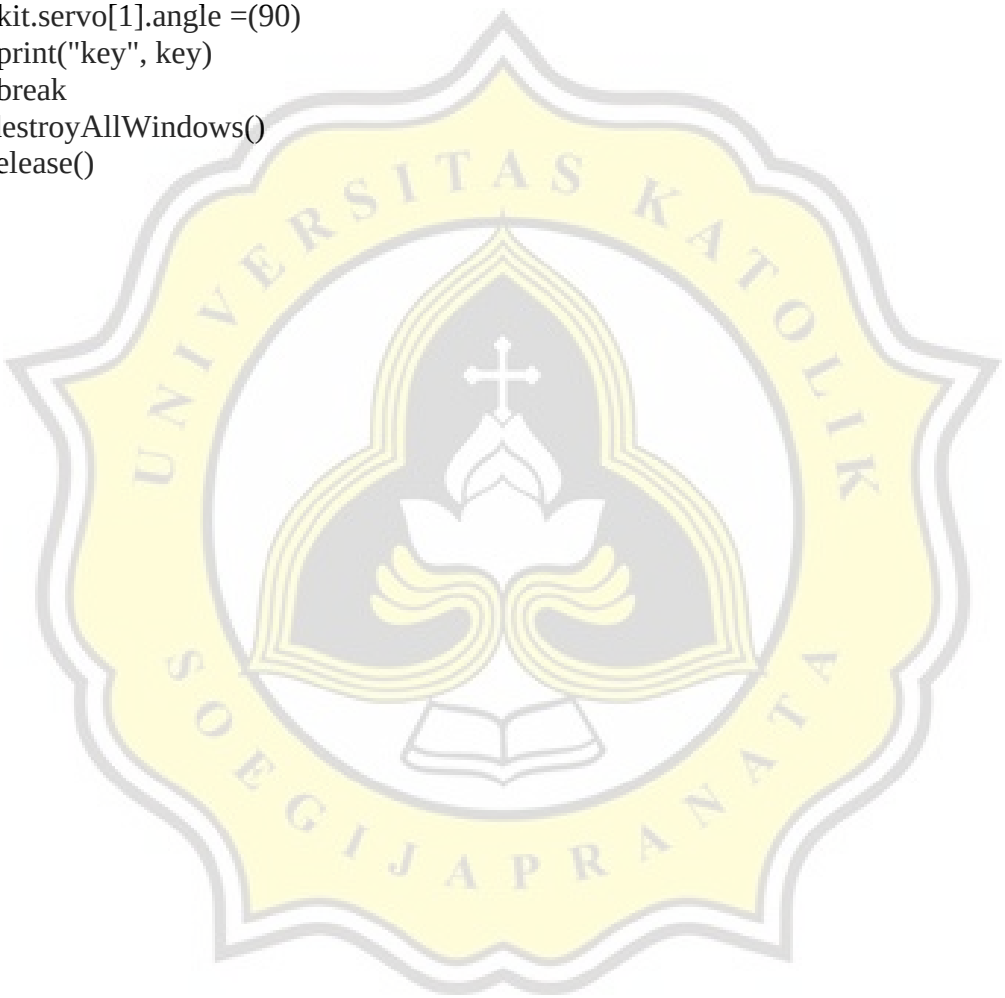
        y_position = 0
    else:
        y_position = y_position
    kit.servo[0].angle =(x_position)
    kit.servo[1].angle =(y_position)


#Exit Key
    key = cv2.waitKey(1)
    if key == 1:
        kit.servo[0].angle =(90)
        kit.servo[1].angle =(90)
        print("key", key)
        break
cv2.destroyAllWindows()
cap.release()
```



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