

In []:

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import cv2 #importing opencv library this i to open camera and take the video
import numpy as np # to convert image to array and expand dimensions
from keras.models import load_model # to load the saved model
from keras.preprocessing import image # to preprocess the image
model = load_model("animal.h5") # we are loading the saved model
video = cv2.VideoCapture(0) # two parameters 1, bool 0 or 1 , frame
index = ["bear","crow","elephant","raccoon","rat"]
while(1):
    success,frame = video.read()# read the frame from video
    cv2.imwrite("image.jpg",frame) # save the frame in image format
    img = image.load_img("image.jpg",target_size = (64,64)) # Load the saved image
    x = image.img_to_array(img)# convert to array
    x = np.expand_dims(x,axis = 0)# expand dimensions
    pred = model.predict_classes(x)# send data for prediction
    p = pred[0] # 0,1,2,3,4 see the class
    cv2.putText(frame,"predicted animal is "+str(index[p]),(100,100),cv2.FONT_HERSHEY_SIMPL
    cv2.imshow("showcasewindow",frame) # show case the video
    if cv2.waitKey(1) & 0xFF == ord('a'): # to close the video window type a
        break
video.release()# camera gets released
cv2.destroyAllWindows()# all video windows will be closed
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