import matplotlib.pyplot as plt

import numpy as np

import cv2

from keras.preprocessing.image import img\_to\_array

from tensorflow.keras.layers import Input,Dense,Conv2D,MaxPooling2D,UpSampling2D

from tensorflow.keras.models import Sequential

img\_data=[]

img=cv2.imread("/content/drive/MyDrive/lena15.jpg",1)

SIZE=256

img=cv2.cvtColor(img,cv2.COLOR\_BGR2RGB)

img=cv2.resize(img,(SIZE,SIZE))

plt.imshow(img)



img\_data.append(img\_to\_array(img))

img\_array=np.reshape(img\_data,(len(img\_data),SIZE,SIZE,3))

img\_array=img\_array.astype('float32')/255

model=Sequential()

model.add(Conv2D(32,(3,3),activation='relu',padding='same',input\_shape=(SIZE,SIZE,3)))

model.add(MaxPooling2D((2,2),padding='same'))

model.add(Conv2D(8,(3,3),activation='relu',padding='same'))

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model.add(Conv2D(8,(3,3),activation='relu',padding='same'))

model.add(UpSampling2D((2,2)))

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model.add(UpSampling2D((2,2)))

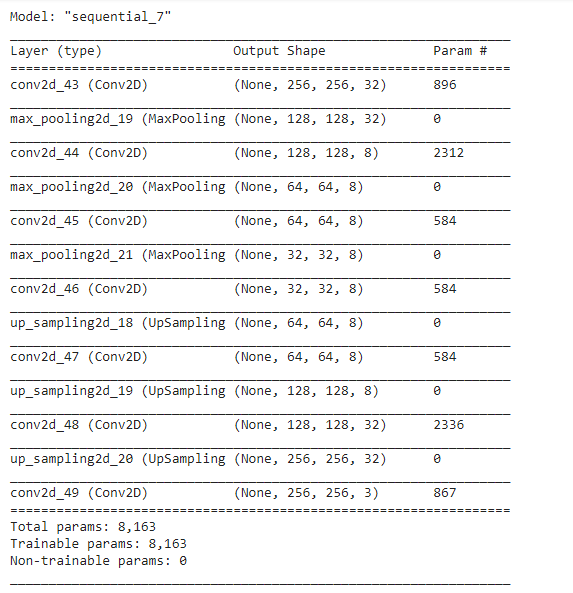
model.add(Conv2D(32,(3,3),activation='relu',padding='same'))

model.add(UpSampling2D((2,2)))

model.add(Conv2D(3,(3,3),activation='relu',padding='same'))

model.compile(optimizer='adam',loss='mean\_squared\_error',metrics=['accuracy'])

model.summary()



model.fit(img\_array,img\_array,epochs=500,shuffle=True)

pred=model.predict(img\_array)

plt.imshow(pred[0].reshape(SIZE,SIZE,3))

