DATA SOURCES:

```
import kagglehub

shravankumar9892_image_colorization_path=kagglehub.dataset_download('shravankumar9892/image-colorization')

salimhammadi07_pretrained_resunet_patchgan_path=kagglehub.dataset_download('salimhammadi07/pretrained-resunet-patchgan')

print('Data source import complete.')


!pip install torchsummary

!pip install pytorch-lightning

import os

from pathlib import Path


# Import glob to get the files directories recursively

import glob


# Import Garbage collector interface

import gc


# Import OpenCV to transforme pictures

import cv2


# Import Time

import time


# import numpy for math calculations

import numpy as np


# Import pandas for data (csv) manipulation

import pandas as pd


# Import matplotlib for plotting
```

```
import matplotlib.pyplot as plt
import matplotlib
matplotlib.style.use('fivethirtyeight')
%matplotlib inline

import PIL
from PIL import Image

from skimage.color import rgb2lab, lab2rgb
import pytorch_lightning as pl
# Import pytorch to build Deel Learling Models
import torch
from torch import nn, optim
from torchvision import transforms
from torch.utils.data import Dataset, DataLoader
from torch.autograd import Variable
from torchvision import models
from torch.nn import functional as F
import torch.utils.data
from torchvision.models.inception import inception_v3
from scipy.stats import entropy
from torchsummary import summary
# Import tqdm to show a smart progress meter
from tqdm import tqdm
# Import warnings to hide the unnessairy warniings
import warnings
warnings.filterwarnings('ignore')
device = torch.device("cuda" if torch.cuda.is_available() else "cpu")
```