LETSGROWMORE DATA SCIENCE IMAGE TO PENCIL SKETCH

PRANJAL JAIN

import matplotlib.pyplot as plt

TASK - 4

import numpy as np

plt.style.use('seaborn')

import cv2

In [3]:

Loading and Plotting Original Image

In [4]: img=cv2.imread('cat.jpg')

img=cv2.cvtColor(img,cv2.COLOR_BGR2RGB)

plt.figure(figsize=(8,8)) plt.axis("off") plt.title("Original Image") plt.imshow(img)

Out[4]: <matplotlib.image.AxesImage at 0x21071e7ffd0> Original Image

Converting Original Image to GrayScale In [5]: img_gray=cv2.cvtColor(img,cv2.COLOR_RGB2GRAY) plt.figure(figsize=(8,8))

plt.axis("off") plt.imshow(img_gray)

plt.show()

plt.title("GrayScale Image")

Inverting the Image img_invert=255-img_gray plt.figure(figsize=(8,8)) plt.axis("off") plt.imshow(img_invert) plt.show()

In [6]:

In [8]:



Smoothing the Image

kernal=np.array([[-1,-1,-1],

[-1,9,-1], [-1, -1, -1]]) final_sketch=cv2.filter2D(img_sketch, -1, kernal) plt.axis("off") plt.imshow(final_sketch,cmap="gray") plt.title("Final Sketch Image") plt.show()

Final Sketch Image

Displaying all the Images

plt.axis("off") plt.title("Original Image") plt.subplot(1,5,2)

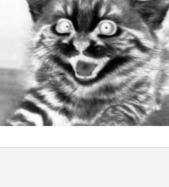
plt.title("GrayScale Image") plt.subplot(1,5,3)plt.imshow(img_invert) plt.axis("off") plt.title("Inverted Image") plt.subplot(1,5,4) plt.imshow(blurred_image) plt.axis("off") plt.title("Smoothen Image") plt.subplot(1,5,5)

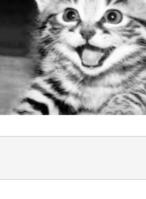
plt.show()

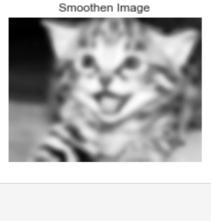
plt.imshow(img_gray) plt.axis("off")

Original Image

plt.title("Final Sketch Image")









Final Sketch Image

GrayScale Image

plt.title("Inverted Image") Inverted Image

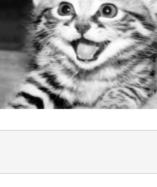
plt.title("Smoothen Image") plt.show() Smoothen Image

Converting Image to Pencil Sketch img_sketch=cv2.divide(img_gray, inv_blurred , scale=255) plt.figure(figsize=(8,8)) #Here we are sharpening the image obtained.

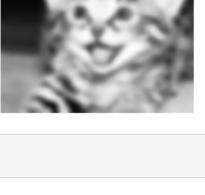
In [9]: plt.figure(figsize=(20,20)) plt.subplot(1,5,1) plt.imshow(img)

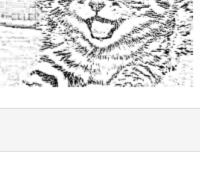
plt.imshow(final_sketch,cmap="gray") plt.axis("off")

GrayScale Image



Inverted Image





In []: