LGMVIP- TASK 04

IMAGE TO PENCIL SKETCH

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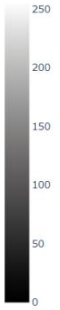
```
[ ]  #Importing Packages
     import cv2
     import numpy as np
     import plotly.express as px
```

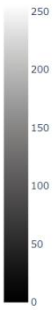
```
     #Loading Images
     img = cv2.imread(r"flower.png")
     img = cv2.cvtColor(img,cv2.COLOR_BGR2RGB)
     imgs=px.imshow(img)
     #imgs.update_layout(width=990, height=600 ,margin=dict(l=20, r=20, b=10, t=10))
     imgs.update_xaxes(showticklabels=False).update_yaxes(showticklabels=False)
     imgs.show()
```

```
#Resizing image shape
scale_percent = 0.60
width = int(img.shape[1]*scale_percent)
height = int(img.shape[0]*scale_percent)
dim = (width,height)
resized = cv2.resize(img,dim,interpolation = cv2.INTER_AREA)
res=px.imshow(resized)
res.update_xaxes(showticklabels=False).update_yaxes(showticklabels=False)
res.show()
```

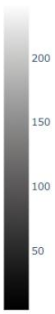

```
[ ]  #Converting an image into gray_scale image
     grayscale = cv2.cvtColor(sharpened , cv2.COLOR_BGR2GRAY)
     gray = px.imshow(grayscale, color_continuous_scale='gray')
     gray.update_xaxes(showticklabels=False).update_yaxes(showticklabels=False)
     gray.show()
```



```
[ ]  #Inverting the image
     invs = 255-grayscale
     inv=px.imshow(invs,color_continuous_scale='gray')
     inv.update_xaxes(showticklabels=False).update_yaxes(showticklabels=False)
     inv.show()
```




```
#Smoothing the image
gauss = cv2.GaussianBlur(invs,ksize=(15,15),sigmaX=0,sigmaY=0)
gaus=px.imshow(gauss,color_continuous_scale='gray')
gaus.update_xaxes(showticklabels=False).update_yaxes(showticklabels=False)
gaus.show()
```



```
[ ]  #Obtaining the final sketch
     def dodgeV2(image,mask):
         return cv2.divide(image,255-mask,scale=256)

     pencil_img = dodgeV2(grayscale,gauss)
     sketch=px.imshow(pencil_img,color_continuous_scale='gray')
     #sketch.update_layout(width=990, height=600 ,margin=dict(l=20, r=20, b=10, t=10))
     sketch.update_layout(coloraxis_showscale=False)
     sketch.update_xaxes(showticklabels=False).update_yaxes(showticklabels=False)
     sketch.show()
```