IBM Project Name: Real-Time Communication System Powered by AI for Specially Abled

TEAM ID: PNT2022TMID51692

Importing req. lib.

```
import cv2 import
numpy as np
import matplotlib.pyplot as plt
```

Image processiong #

Create a image

```
img1 = np.zeros((400,600,3),np.uint8) plt.imshow(img1)
```

Drawing Functions

Draw a circle

```
circle = cv2.circle(img1, (300,200), 50, (255,0,0), -1)            # (0,0,0)--->(R,G,B)
plt.imshow(img1) # Drawing rectangle
rectangle = cv2.rectangle(img1,(200,100),(400,300),(0,255,0),6)
plt.imshow(img1) # Drawing line
```

```
line1 = cv2.line(img1,(200,100),(400,300),(0,0,255),4) line2 =

cv2.line(img1,(200,300),(400,100),(0,0,255),4)

plt.imshow(img1)


circle = cv2.circle(img1, (300,200), 50, (255,255,0), -1)          # (0,0,0)--->(R,G,B)

plt.imshow(img1) # Text on image


text = cv2.putText(img1, 'openCV', (200,50), cv2.FONT_HERSHEY_SIMPLEX, 2, (255,255,255),5)

plt.imshow(img1) # Reading the image


img = cv2.imread('/content/boy.jpg',1) plt.imshow(img)

# Convert BGR to RGB


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

plt.imshow(img_rgb) # Convert BGR to Gray


img_gray = cv2.cvtColor(img, cv2.COLOR_BGR2GRAY)

plt.imshow(img_gray)


# Finding shape


img_rgb.shape (983,

736, 3)
```

```
img_gray.shape (983,

736)

# Resize the image


resize = cv2.resize(img_rgb,(500,1000))

print(resize.shape) plt.imshow(resize)

# Image crop


crop = resize[130:370,150:300]

plt.imshow(crop) # Edge

Detection


edge = cv2.Canny(img_rgb,100,200)

plt.imshow(edge) # Blur image


r = resize[130:370,150:300] blur =

cv2.GaussianBlur(r,(13,13),cv2.BORDER_DEFAULT)

plt.imshow(resize) plt.imshow(blur)
```