```
pip install pillow
```

```
Requirement already satisfied: pillow in /usr/local/lib/python3.10/dist-packages (9.4.0)
```

```
from PIL import Image as Myimage
import PIL.ImageDraw as MyimageDraw
import PIL.ImageFont as Myimagefont
```

```
import matplotlib.pyplot as plt
```

```
import PIL.Image as Myimg
import PIL.ImageFilter as Myfilter
```

```
from google.colab import files

uploaded = files.upload()
```

Choose Files me_2021.jpg

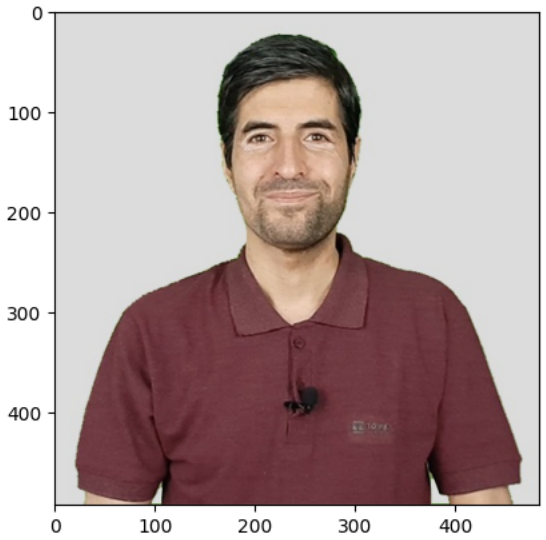
- **me_2021.jpg**(image/jpeg) - 41162 bytes, last modified: 10/12/2021 - 100% done

```
Saving me_2021.jpg to me_2021.jpg
```

```
image = Myimage.open("me_2021.jpg")
```

```
plt.imshow(image)
```

```
<matplotlib.image.AxesImage at 0x7a04887b1000>
```




```
#Save image with different Formate!,BMP, PNG , JPEG , TIFF

image.save("me_2021.png") #use ext in the end!
```

```
#Customize Qualitlies
image.save("me_2021.jpeg" , qualities = 90)
```

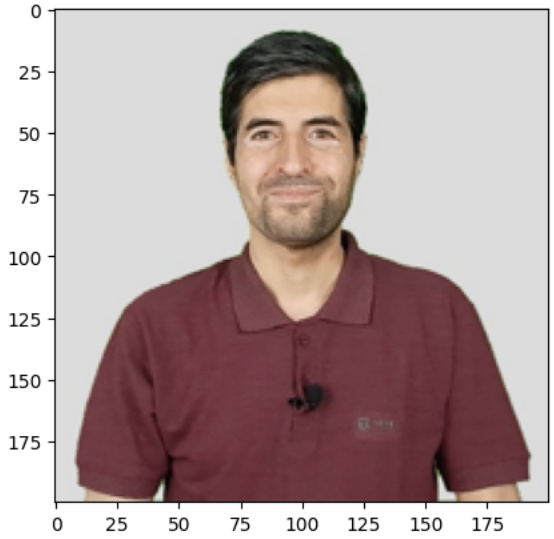
```
#Image attributes formate , size , color
image = Myimage.open("me_2021.jpg")
print("Type :",type(image))
print("Size :" , image.size)
print("Formate :" , image.format)
print("Color Mode :",image.mode)
```

```
Type : <class 'PIL.JpegImagePlugin.JpegImageFile'>
Size : (484, 493)
Formate : JPEG
Color Mode : RGB
```

```
#Resize Image

image = Myimage.open("me_2021.jpg")
resize = image.resize((200,200))
plt.imshow(resize)
```

```
<matplotlib.image.AxesImage at 0x7a0488893040>
```

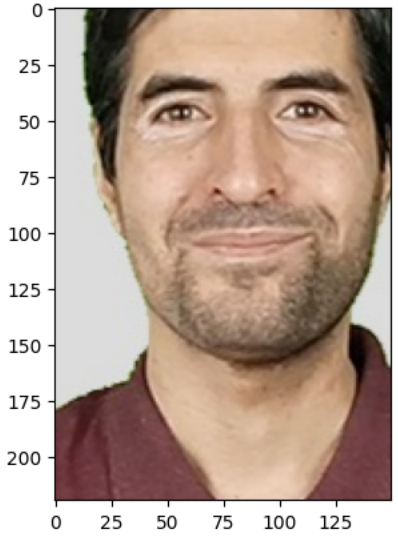



```
#Rotate Image
image = Myimage.open("me_2021.jpg")
rotate = image.rotate(30)
plt.imshow(rotate)
rotate.save("you_2021.png") # we can save also in different format
```


```
#Create a Thumbnail Image
#image = Myimage.open("me_2021.jpg")
#image_Copy = image.copy()
#final = image_Copy.thumbnail((100, 100))
#plt.imshow(final)
```

```
#crop Image
image = Myimage.open("me_2021.jpg")
cropimg = image.crop((150, 80 , 300 , 300))
plt.imshow(cropimg)
```

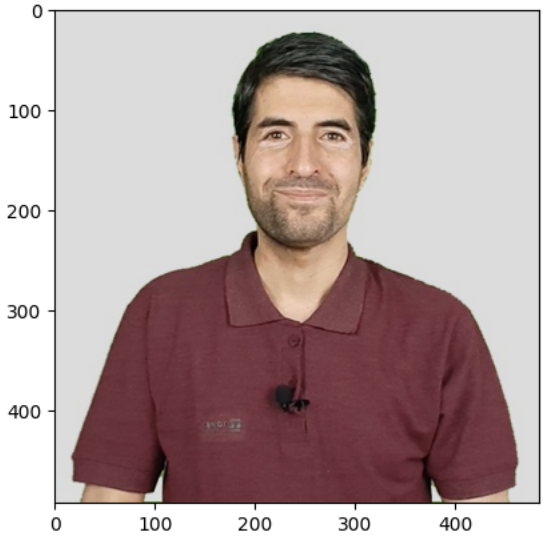
```
<matplotlib.image.AxesImage at 0x7a0470b0cd00>
```




```
#Rotate and flip images (transpose)
image = Myimage.open("me_2021.jpg")
transpos_img = image.transpose(Myimage.ROTATE_270) #rotate, 90, 180 etc
flip_img = image.transpose(Myimage.FLIP_LEFT_RIGHT) #or FLIP.TOP_BOTTOM
```

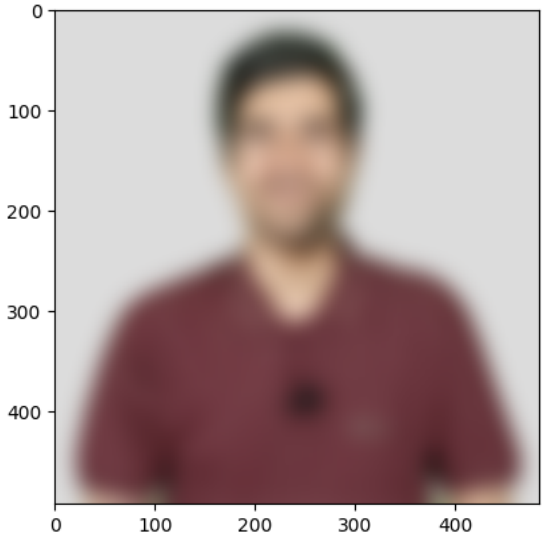
```
plt.imshow(transpos_img)
plt.imshow(flip_img)
```

```
<matplotlib.image.AxesImage at 0x7a0470cd3640>
```



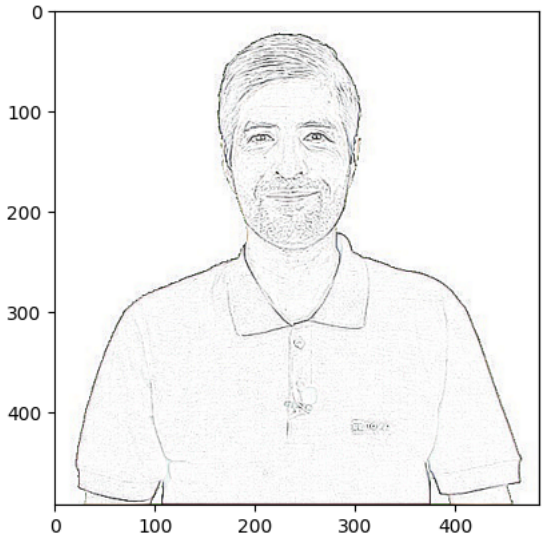

```
#Filters
image = Myimage.open("me_2021.jpg")
#blur_image = image.filter(Myfilter.BLUR)
#blur_image = image.filter(Myfilter.BoxBlur(3))
blur_image = image.filter(Myfilter.GaussianBlur(radius = 10))
plt.imshow(blur_image)
```

```
<matplotlib.image.AxesImage at 0x7a045dea0d60>
```



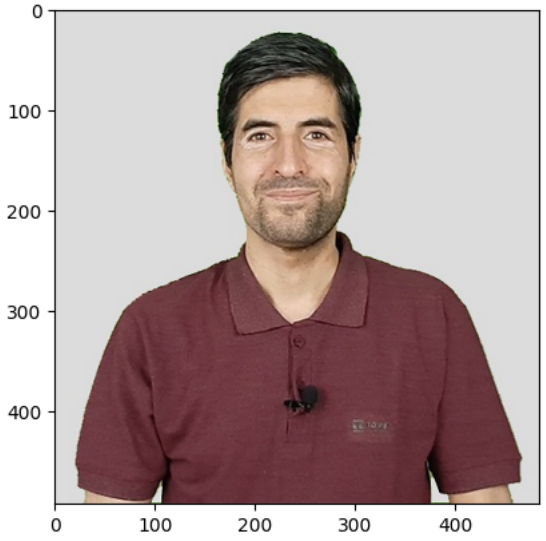
```
#Contous Filter
image = Myimage.open("me_2021.jpg")
blur_image = image.filter(Myfilter.CONTOUR)
plt.imshow(blur_image)
```

```
<matplotlib.image.AxesImage at 0x7a045dd58b20>
```



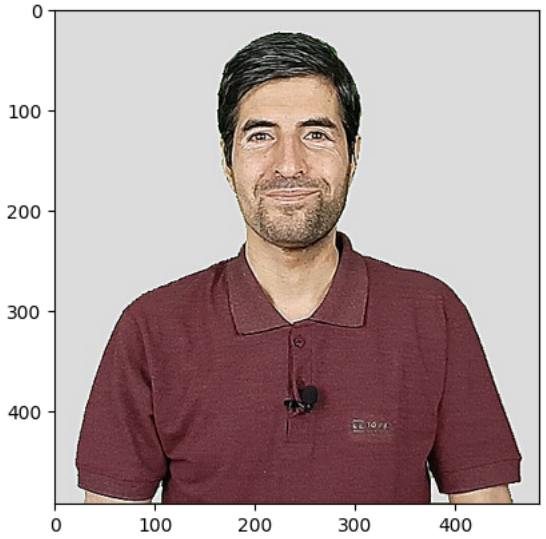

```
#Detailed filter!
image = Myimage.open("me_2021.jpg")
detail_image = image.filter(Myfilter.DETAIL)
plt.imshow(detail_image)
```

```
<matplotlib.image.AxesImage at 0x7a045dfcb970>
```



```
#Edge enhance filter!
image = Myimage.open("me_2021.jpg")
edge_enhance = image.filter(Myfilter.EDGE_ENHANCE)
plt.imshow(edge_enhance)
```

```
<matplotlib.image.AxesImage at 0x7a045dc1c970>
```




```
#EMBOS FILTER!

image = Myimage.open("me_2021.jpg")
embos_image = image.filter(Myfilter.EMBOSS)
plt.imshow(embos_image)
```

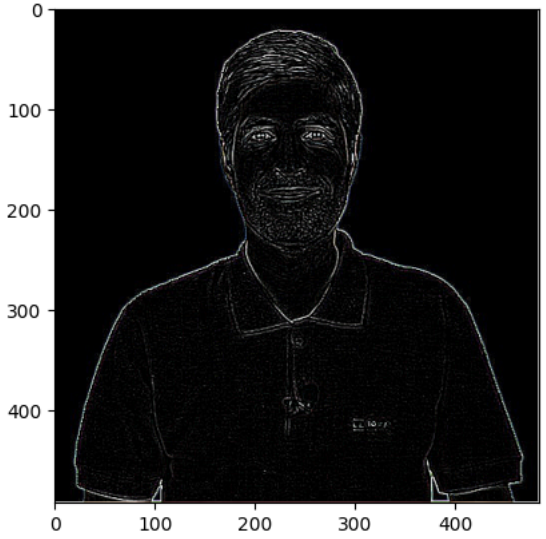
```
<matplotlib.image.AxesImage at 0x7a045dc9fbb0>
```



```
#Find Edge Filter!

image = Myimage.open("me_2021.jpg")
find_edge = image.filter(Myfilter.FIND_EDGES)
plt.imshow(find_edge)
```

```
<matplotlib.image.AxesImage at 0x7a045dc52dd0>
```



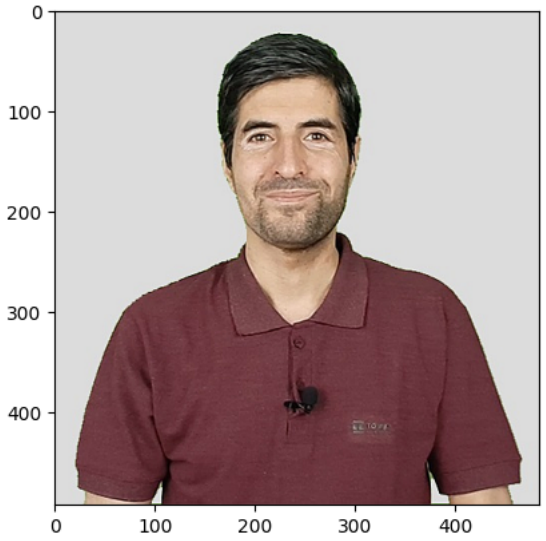

```
#ADDING SMOOTH AND SMOOTH MORE FILTER

image = Myimage.open("me_2021.jpg")
Smooth_filter = image.filter(Myfilter.SMOOTH) #Myfilter.SMOOTHMORE
plt.imshow(Smooth_filter)
```

```
<matplotlib.image.AxesImage at 0x7a045d9ffc40>
```


```
#Adding Sharpen filter
image = Myimage.open("me_2021.jpg")
Sharpen_filter = image.filter(Myfilter.SHARPEN)
plt.imshow(Sharpen_filter)
```

```
<matplotlib.image.AxesImage at 0x7a045da3f3a0>
```




**Add Simple text to Image as Watermark**

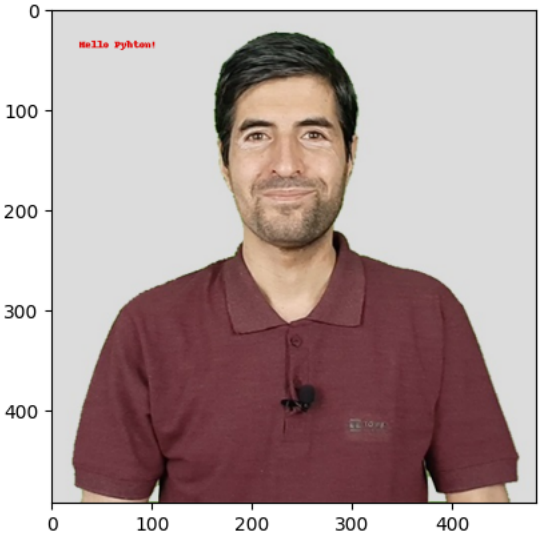
```
image = Myimage.open("me_2021.jpg")
Watermark = MyimageDraw.Draw(image)
Watermark.text((28, 30) , "Hello Pyhton!" , fill =(225 , 0 ,0)) #red , green, blue
plt.imshow(image)
```

```
<matplotlib.image.AxesImage at 0x7a045d942b00>
```


**Add text (Watermark) with custom font to image**

```
image = Myimage.open("me_2021.jpg")
#Myfot = Myimagefont.truetype("Font/tahoma.ttf", 20) #otf ttf
Watermark = MyimageDraw.Draw(image)
Watermark.text((28, 30) , "Hello Pyhton!" , fill =(225 , 0 ,0)) #red , green, blue
plt.imshow(image)
```

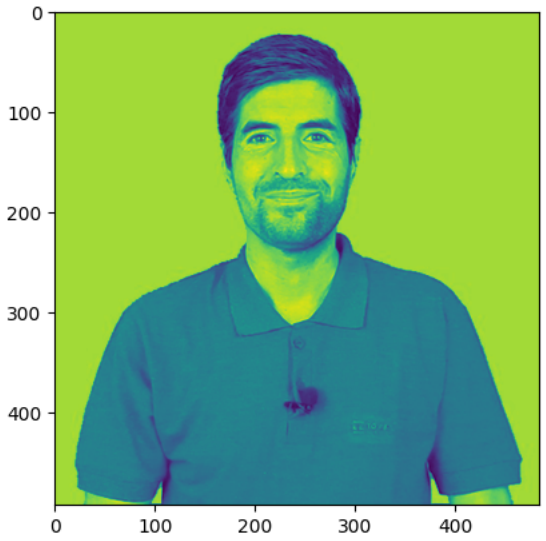
```
<matplotlib.image.AxesImage at 0x7a045db9c520>
```




**Split image bands ( Color Channels)**

```
image = Myimage.open("me_2021.jpg")
ColorBands = image.split()
r:Myimage.image = ColorBands[0] #0 ,1, 2
#im: Myimage.merge("RGB" , (r,g ,b))
plt.imshow(r)
```

```
<matplotlib.image.AxesImage at 0x7a045e1d4340>
```

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