

```
!pip install opencv-python
```

```
Looking in indexes: https://pypi.org/simple, https://us-python.pkg.dev/colab-wheels/public/simple/  
Requirement already satisfied: opencv-python in /usr/local/lib/python3.9/dist-packages (4.7.0.72)  
Requirement already satisfied: numpy>=1.17.3 in /usr/local/lib/python3.9/dist-packages (from opencv-python) (1.22.4)
```

```
import cv2  
image = cv2.imread('/content/PIL.jpg')
```

```
import time  
start = time.time()
```

```
# INTERNAL MECHANISM OF MODEL
```

```
gray = cv2.cvtColor(image, cv2.COLOR_BGR2GRAY)  
from google.colab.patches import cv2_imshow  
cv2_imshow(gray)
```



```
invert = cv2.bitwise_not(gray)  
cv2_imshow(invert)
```



```
blur = cv2.GaussianBlur(invert, (15, 15), 0)  
cv2_imshow(blur)
```



```
invertblur = cv2.bitwise_not(blur)  
cv2_imshow(invertblur)
```



```
sketch = cv2.divide(gray, invertblur, scale = 250.0)
cv2_imshow(sketch)
```



```
from google.colab.patches import cv2_imshow
cv2.imwrite('output.png', sketch)
```

True

```
#For time taken calculation
```

```
end = time.time()
print(end-start)
```

44.743003368377686