

```
import cv2
import matplotlib.pyplot as plt
image = cv2.imread('car1.jpg')
image = cv2.cvtColor(image, cv2.COLOR_BGR2RGB)
plt.imshow(image)
plt.show()
```



```
import cv2
from google.colab.patches import cv2_imshow
image = cv2.imread('car1.jpg')
gray_image = cv2.cvtColor(image, cv2.COLOR_BGR2GRAY)
cv2_imshow(image)
cv2_imshow(gray_image)
```

→



```
import cv2
from google.colab.patches import cv2_imshow
image = cv2.imread('car1.jpg')
gray_image = cv2.cvtColor(image, cv2.COLOR_BGR2GRAY)
```

```
blurred_image = cv2.GaussianBlur(gray_image, (5,5),0)
edges = cv2.Canny(blurred_image, 100, 200)
cv2_imshow(image)
cv2_imshow(gray_image)
cv2_imshow(edges)
```



```
import cv2
from google.colab.patches import cv2_imshow
image = cv2.imread('car1.jpg')
filtered_image = cv2.bilateralFilter(image, 5, 50,50)
cv2_imshow(image)
cv2_imshow(filtered_image)
```



```
import cv2
from google.colab.patches import cv2_imshow
image = cv2.imread('car1.jpg')
gray_image = cv2.cvtColor(image, cv2.COLOR_BGR2GRAY)
blurred_image = cv2.GaussianBlur(gray_image, (5,5),0)
edges = cv2.Canny(blurred_image, 100, 200)
cv2_imshow(image)
cv2_imshow(gray_image)
cv2_imshow(edges)
```

↔



Double-click (or enter) to edit

```
import cv2
import numpy as np
from google.colab.patches import cv2_imshow
```

```
image = cv2.imread('car2.jpg')
image = cv2.cvtColor(image, cv2.COLOR_BGR2GRAY)
blurred_image = cv2.GaussianBlur(gray_image, (5,5), 0)
edges = cv2.Canny(blurred_image, 100, 200)
contours, _ = cv2.findContours(edges, cv2.RETR_EXTERNAL, cv2.CHAIN_APPROX_SIMPLE)
for contour in contours:
    area = cv2.contourArea(contour)
    x, y, w, h = cv2.boundingRect(contour)
    aspect_ratio = float(w)/h
    if area > 1000 and aspect_ratio > 2 and aspect_ratio < 6:
        cv2.rectangle(image, (x, y), (x+w, y+h), (0, 255, 0), 2)
        highlight = image[y:y+h, x:x+w]
        highlight = cv2.convertScaleAbs(highlight, alpha=1.5, beta=50)
        image[y:y+h, x:x+w] = highlight
cv2_imshow(image)
```

