

```
In [42]: import numpy as np
```

```
In [43]: import matplotlib.pyplot as plt
```

```
In [44]: from PIL import Image
```

```
In [45]: red_img= Image.open(r'C:\Users\chaud\OneDrive\Desktop\all photo\GTbike.jpg')  
red_img
```

```
Out[45]:
```



```
In [46]: GTbike_arr = np.asarray(red_img)
GTbike_arr
```

```
Out[46]: array([[[42, 42, 40],
   [42, 42, 40],
   [42, 42, 40],
   ...,
   [23, 25, 24],
   [23, 25, 24],
   [23, 25, 24]],

   [[42, 42, 40],
   [42, 42, 40],
   [42, 42, 40],
   ...,
   [23, 25, 24],
   [23, 25, 24],
   [23, 25, 24]],

   [[42, 42, 40],
   [42, 42, 40],
   [42, 42, 40],
   ...,
   [23, 25, 24],
   [23, 25, 24],
   [23, 25, 24]],

   .....

   [[[54, 38, 39],
   [46, 30, 31],
   [40, 24, 25],
   ...,
   [17, 13, 12],
   [18, 14, 13],
   [18, 14, 13]],

   [[34, 19, 12],
   [41, 26, 19],
   [37, 22, 15],
   ...,
   [15, 14, 12],
   [15, 14, 12],
   [14, 13, 11]],

   [[47, 32, 25],
   [52, 37, 30],
   [48, 33, 26],
   ...,
   [15, 14, 12],
   [15, 14, 12],
   [14, 13, 11]]], dtype=uint8)
```

```
In [47]: plt.imshow(red_img)
plt.show
```

```
Out[47]: <function matplotlib.pyplot.show(close=None, block=None)>
```

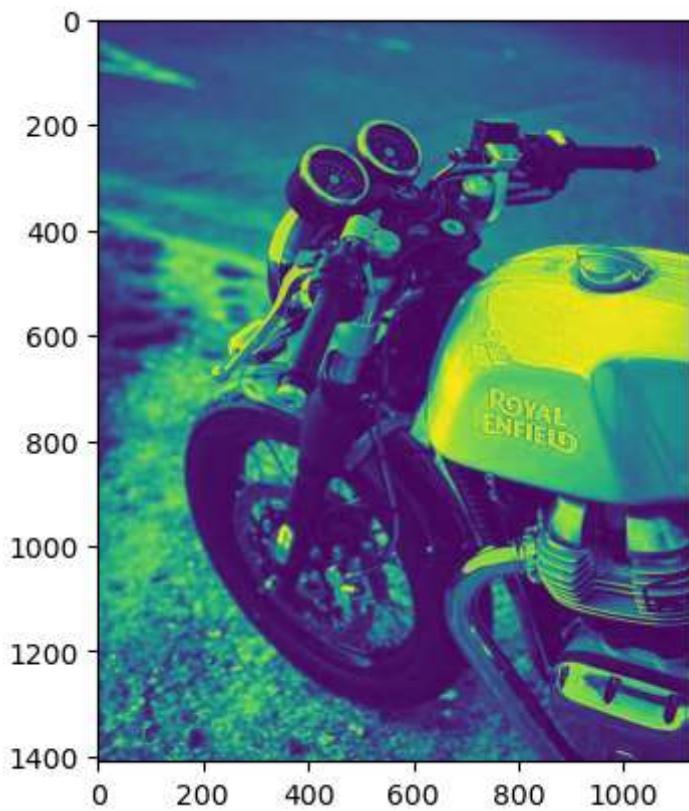


```
In [48]: GTbike_arr.shape
```

```
Out[48]: (1410, 1128, 3)
```

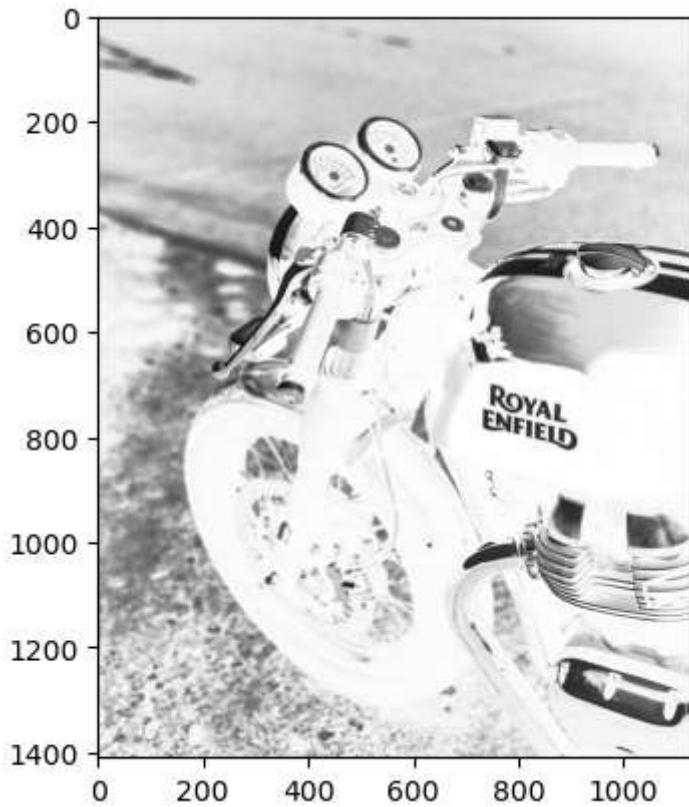
```
In [49]: plt.imshow(GTbike_arr[:, :, 0])
```

```
Out[49]: <matplotlib.image.AxesImage at 0x28d75a26d50>
```



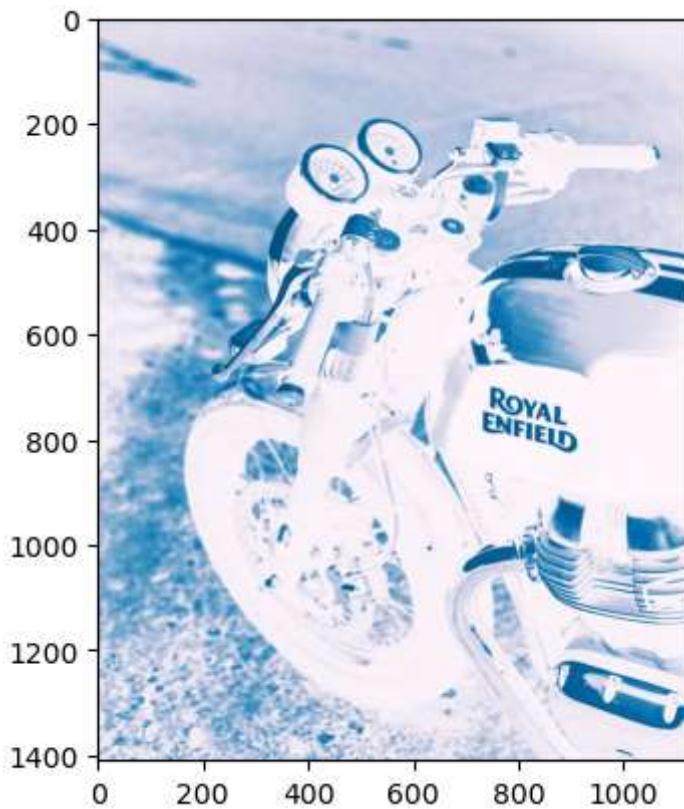
```
In [50]: plt.imshow(GTbike_arr[:, :, 1], cmap='Greys')
```

```
Out[50]: <matplotlib.image.AxesImage at 0x28d75a99a90>
```



```
In [51]: plt.imshow(GTbike_arr[:, :, 1], cmap='PuBu')
```

```
Out[51]: <matplotlib.image.AxesImage at 0x28d73aac050>
```



```
In [52]: GTbike_arr[:, :, 1]
```

```
Out[52]: array([[42, 42, 42, ..., 25, 25, 25],  
                 [42, 42, 42, ..., 25, 25, 25],  
                 [42, 42, 42, ..., 25, 25, 25],  
                 ....,  
                 [38, 30, 24, ..., 13, 14, 14],  
                 [19, 26, 22, ..., 14, 14, 13],  
                 [32, 37, 33, ..., 14, 14, 13]], dtype=uint8)
```

```
In [53]: GTbike_arr[:, :, 2]
```

```
Out[53]: array([[40, 40, 40, ..., 24, 24, 24],  
                 [40, 40, 40, ..., 24, 24, 24],  
                 [40, 40, 40, ..., 24, 24, 24],  
                 ....,  
                 [39, 31, 25, ..., 12, 13, 13],  
                 [12, 19, 15, ..., 12, 12, 11],  
                 [25, 30, 26, ..., 12, 12, 11]], dtype=uint8)
```

```
In [54]: GTbike_arr.shape
```

```
Out[54]: (1410, 1128, 3)
```

```
In [55]: GTbike_red=GTbike_arr.copy()
```

```
In [56]: GTbike_arr
```

```
Out[56]: array([[[42, 42, 40],
   [42, 42, 40],
   [42, 42, 40],
   ...,
   [23, 25, 24],
   [23, 25, 24],
   [23, 25, 24]],

   [[42, 42, 40],
   [42, 42, 40],
   [42, 42, 40],
   ...,
   [23, 25, 24],
   [23, 25, 24],
   [23, 25, 24]],

   [[42, 42, 40],
   [42, 42, 40],
   [42, 42, 40],
   ...,
   [23, 25, 24],
   [23, 25, 24],
   [23, 25, 24]],

   ...,

   [[54, 38, 39],
   [46, 30, 31],
   [40, 24, 25],
   ...,
   [17, 13, 12],
   [18, 14, 13],
   [18, 14, 13]],

   [[34, 19, 12],
   [41, 26, 19],
   [37, 22, 15],
   ...,
   [15, 14, 12],
   [15, 14, 12],
   [14, 13, 11]],

   [[47, 32, 25],
   [52, 37, 30],
   [48, 33, 26],
   ...,
   [15, 14, 12],
   [15, 14, 12],
   [14, 13, 11]]], dtype=uint8)
```

```
In [57]: plt.imshow(GTbike_red)
plt.show()
```



```
In [58]: GTbike_red==GTbike_arr
```

```
Out[58]: array([[[ True,  True,  True],
   [ True,  True,  True],
   [ True,  True,  True],
   ...,
   [ True,  True,  True],
   [ True,  True,  True],
   [ True,  True,  True]],

   [[ True,  True,  True],
   [ True,  True,  True],
   [ True,  True,  True],
   ...,
   [ True,  True,  True],
   [ True,  True,  True],
   [ True,  True,  True]],

   [[ True,  True,  True],
   [ True,  True,  True],
   [ True,  True,  True],
   ...,
   [ True,  True,  True],
   [ True,  True,  True],
   [ True,  True,  True]],

   ...,

   [[ True,  True,  True],
   [ True,  True,  True],
   [ True,  True,  True],
   ...,
   [ True,  True,  True],
   [ True,  True,  True],
   [ True,  True,  True]],

   [[ True,  True,  True],
   [ True,  True,  True],
   [ True,  True,  True],
   ...,
   [ True,  True,  True],
   [ True,  True,  True],
   [ True,  True,  True]],

   [[ True,  True,  True],
   [ True,  True,  True],
   [ True,  True,  True],
   ...,
   [ True,  True,  True],
   [ True,  True,  True],
   [ True,  True,  True]]])
```

```
In [59]: GTbike_red.shape
```

```
Out[59]: (1410, 1128, 3)
```

```
In [60]: GTbike_arr[:, :, 1]
```

```
Out[60]: array([[42, 42, 42, ..., 25, 25, 25],  
                 [42, 42, 42, ..., 25, 25, 25],  
                 [42, 42, 42, ..., 25, 25, 25],  
                 ...,  
                 [38, 30, 24, ..., 13, 14, 14],  
                 [19, 26, 22, ..., 14, 14, 13],  
                 [32, 37, 33, ..., 14, 14, 13]], dtype=uint8)
```

```
In [61]: GTbike_red[:, :, 1] = 0
```

```
In [62]: GTbike_red[:, :, 1]
```

```
Out[62]: array([[0, 0, 0, ..., 0, 0, 0],  
                 [0, 0, 0, ..., 0, 0, 0],  
                 [0, 0, 0, ..., 0, 0, 0],  
                 ...,  
                 [0, 0, 0, ..., 0, 0, 0],  
                 [0, 0, 0, ..., 0, 0, 0],  
                 [0, 0, 0, ..., 0, 0, 0]], dtype=uint8)
```

```
In [63]: plt.imshow(GTbike_red)  
plt.show()
```



```
In [64]: GTbike_red[:, :, 2]
```

```
Out[64]: array([[40, 40, 40, ..., 24, 24, 24],  
                 [40, 40, 40, ..., 24, 24, 24],  
                 [40, 40, 40, ..., 24, 24, 24],  
                 ...,  
                 [39, 31, 25, ..., 12, 13, 13],  
                 [12, 19, 15, ..., 12, 12, 11],  
                 [25, 30, 26, ..., 12, 12, 11]], dtype=uint8)
```

```
In [65]: GTbike_red[:, :, 2] = 0
```

```
In [66]: GTbike_red[:, :, 2]
```

```
Out[66]: array([[0, 0, 0, ..., 0, 0, 0],  
                 [0, 0, 0, ..., 0, 0, 0],  
                 [0, 0, 0, ..., 0, 0, 0],  
                 ...,  
                 [0, 0, 0, ..., 0, 0, 0],  
                 [0, 0, 0, ..., 0, 0, 0],  
                 [0, 0, 0, ..., 0, 0, 0]], dtype=uint8)
```

```
In [67]: plt.imshow(GTbike_red)  
plt.show()
```



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In [ ]:
```

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In [ ]:
```

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In [ ]:
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