

# Lab\_08\_21\_27\_19\_DS

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Name: Saurabh S. Ramteke

Roll No: 21-27-19

M.Tech: Data Science

```
[1]: import numpy as np
import matplotlib.pyplot as plt
import cv2
```

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[2]: img1 = cv2.imread(r"C:\Users\saura\Desktop\Ongoing\Notes\01.
↳LAB_ass\Computer_vision_basics\Images\pic1_SIFT.jpg")
img2 = cv2.imread(r"C:\Users\saura\Desktop\Ongoing\Notes\01.
↳LAB_ass\Computer_vision_basics\Images\pic2_SIFT.jpg")
img1 = cv2.cvtColor(img1, cv2.COLOR_BGR2RGB)
img2 = cv2.cvtColor(img2, cv2.COLOR_BGR2RGB)

# plt.figure(figsize = (5,10))
# plt.imshow(img2)
```

## SIFT

```
[3]: # SIFT object
SIFT = cv2.SIFT_create()
keypoint_1, descriptor_1 = SIFT.detectAndCompute(img1, None)
keypoint_2, descriptor_2 = SIFT.detectAndCompute(img2, None)
```

```
[4]: # Create Feature matcher
bf = cv2.BFMatcher(cv2.NORM_L2, crossCheck = True)
# Match descriptors of both images
matches = bf.match(descriptor_1, descriptor_2)
# Sort matches by distances
matches = sorted(matches, key = lambda y : y.distance)
# Draw first 1000 matches
matched_img = cv2.drawMatches(img1, keypoint_1, img2, keypoint_2, matches[:
↳1000], img2, flags = 2 )

plt.figure(figsize = (15,10))
plt.imshow(matched_img)
```

[4]: <matplotlib.image.AxesImage at 0x1f8bf78fac0>

