

CIS581: Project 3
Part A: Image Stitching
Due: Nov. 1, 2018 at 11:59 pm

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1 Input Images

In this project, I used in total of three images for mosaicing: `boat1.jpg`, `boat2.jpg` and `boat3.jpg`, which are shown in Figure 1, Figure 2, and Figure 3.



Figure 1: `boat1.jpg`



Figure 2: boat2.jpg



Figure 3: boat3.jpg

2 Resulting Image

The resulting image after image stitching is shown in Figure 4.



Figure 4: Resulting Image

3 Results of Corner Detection and Adaptive Non-Maximal Suppression

1. For `boat1.jpg`, the results are shown in Figure 5.

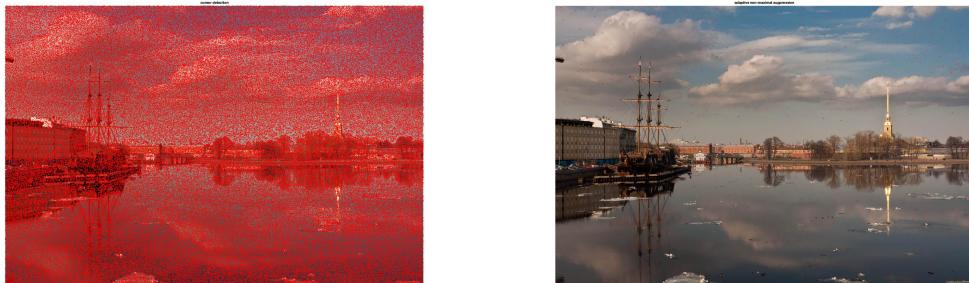


Figure 5: Results of Corner Detection and Adaptive Non-Maximal Suppression of the First Image.

2. For `boat2.jpg`, the results are shown in Figure 6.



Figure 6: Results of Corner Detection and Adaptive Non-Maximal Suppression of the Second Image.

3. For `boat3.jpg`, the results are shown in Figure 7.

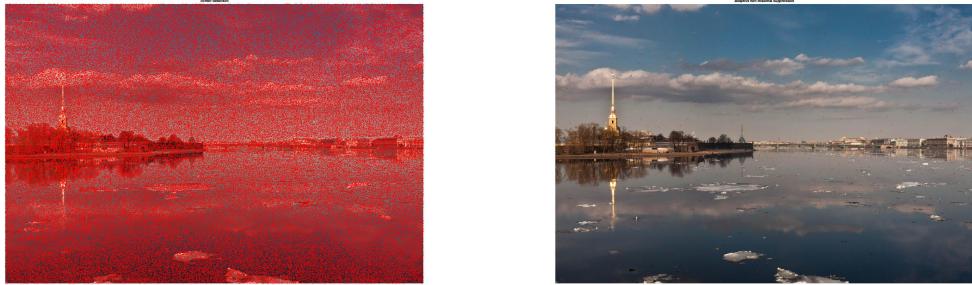


Figure 7: Results of Corner Detection and Adaptive Non-Maximal Suppression of the Third Image.

4 Prior and Post RANSAC Comparison

1. Prior and Post RANSAC of `boat1.jpg` and `boat2.jpg`.

The prior-RANSAC is shown in Figure 8. The post-RANSAC is shown in Figure 9.



Figure 8: Prior-RANSAC of Image 1 and Image 2.



Figure 9: Post-RANSAC of Image 1 and Image 2.

2. Prior and Post RANSAC of `boat2.jpg` and `boat3.jpg`.

The prior-RANSAC is shown in Figure 10. The post-RANSAC is shown in Figure 11.



Figure 10: Prior-RANSAC of Image 2 and Image 3.



Figure 11: Post-RANSAC of Image 2 and Image 3.

5 References

1. <https://www.mathworks.com/help/vision/examples/feature-based-panoramic-image-stitching.html>