Project 3_Part C Report

------ Group 27(Yulai Weng, Simeng Sun)

1. Corners Before and After ANMS

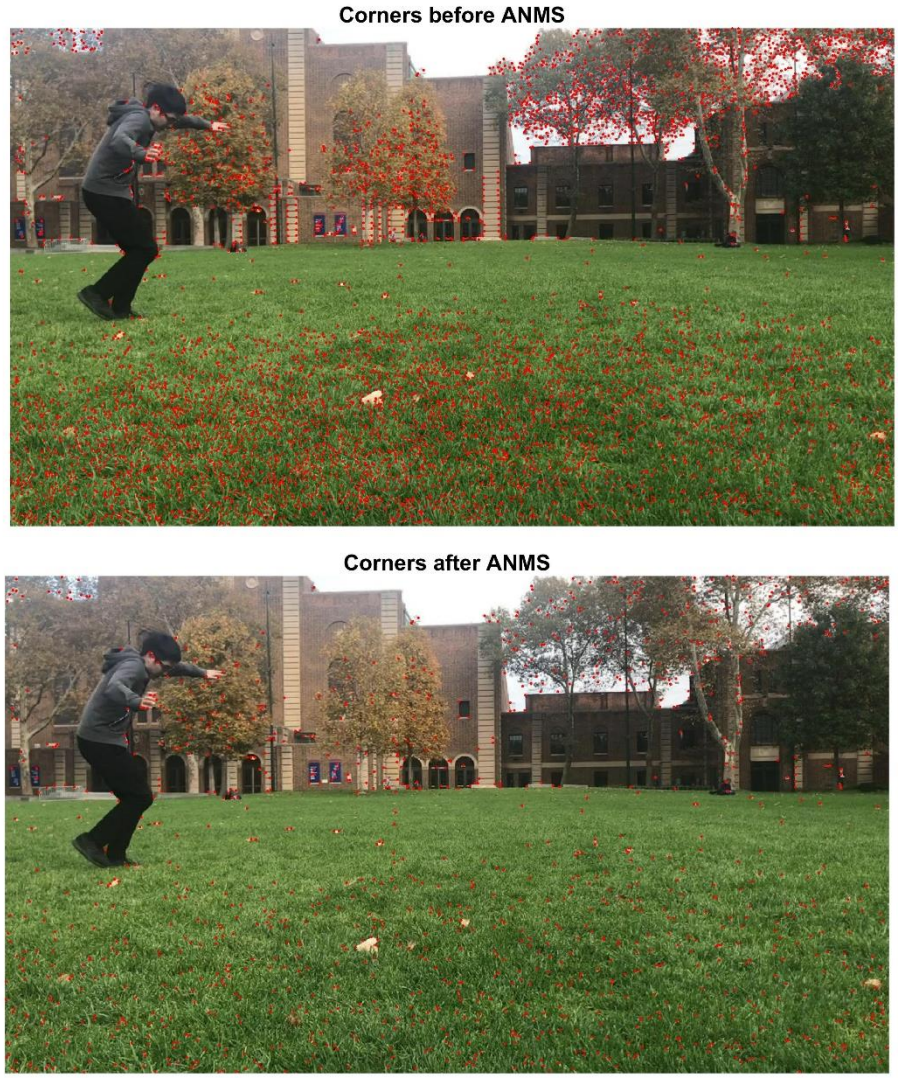

Figure 1. Corners Before and After ANMS for camera 2 video frame 70

Figure 2. Corners Before and After ANMS for camera 2 video frame 90

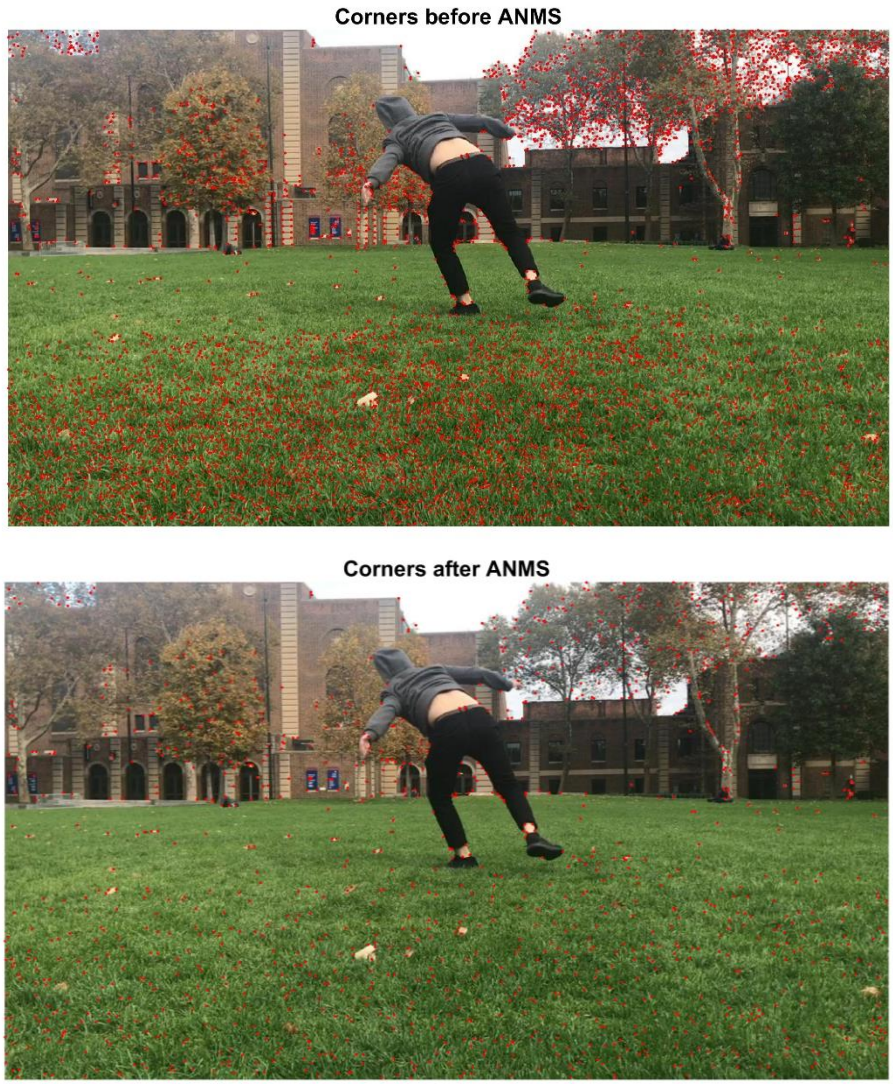

Figure 3. Corners Before and After ANMS for camera 2 video frame 108

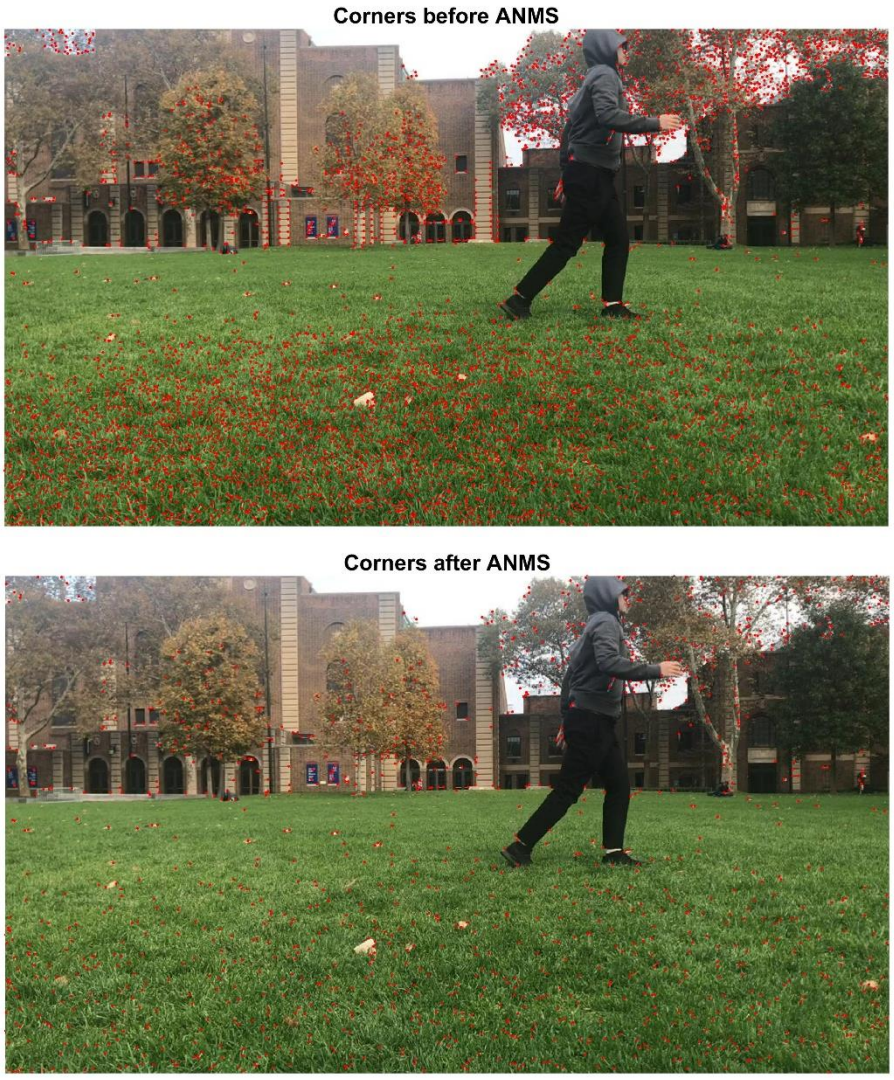

Figure 4. Corners Before and After ANMS for camera 2 video frame 130

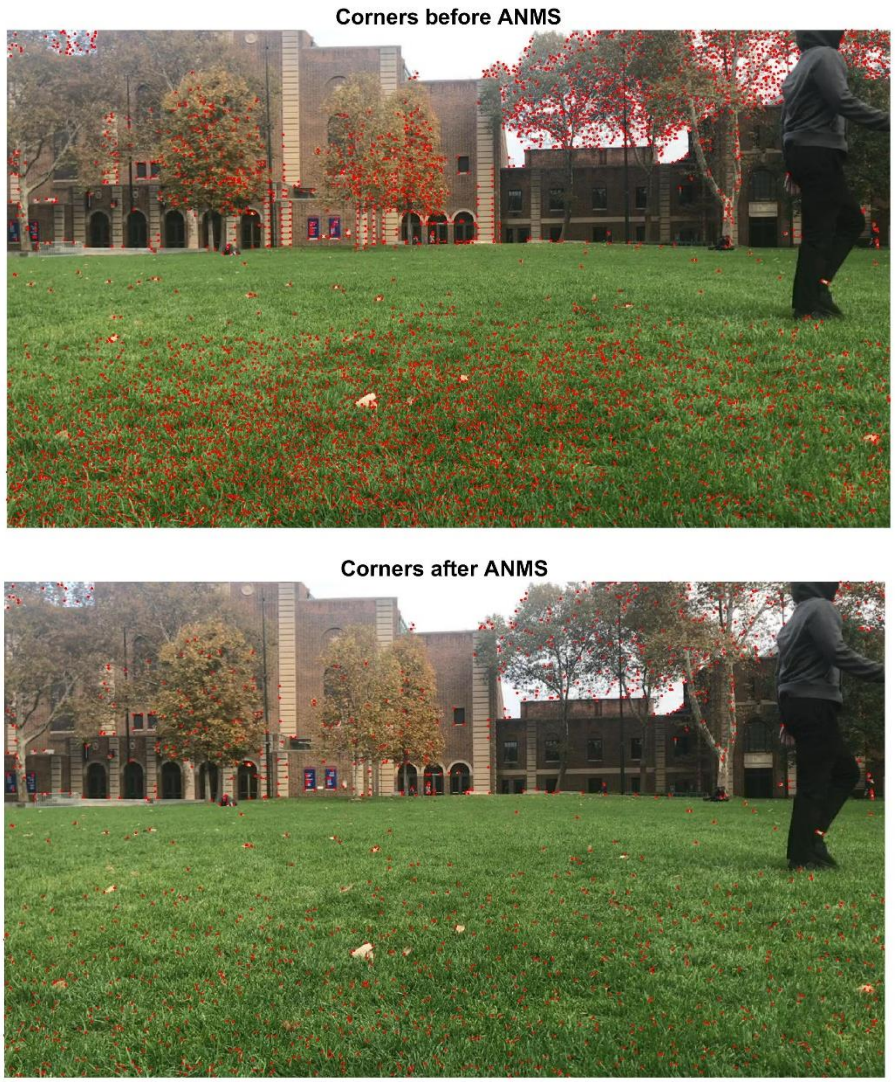

Figure 5. Corners Before and After ANMS for camera 2 video frame 150

As is seen in Fig.1-Fig.5, before ANMS the corners detected by Harris corner detector are very dense on the tree branches and grass. After ANMS, the corners are distributed more evenly on the whole image.

2. Correspondence features before and after RANSAC

Figure 6. Feature Correspondence Between Camera 1 Video Frame 66 and Camera 2 Video Frame 68 before and after RANSAC

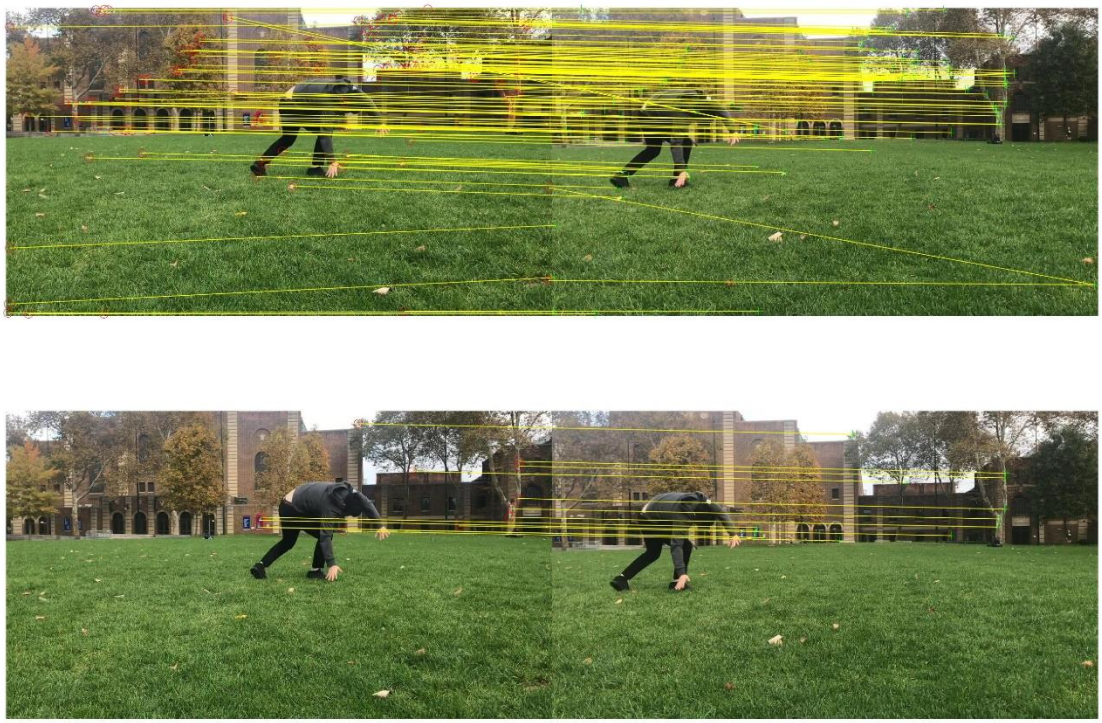

Figure 7. Feature Correspondence Between Camera 1 Video Frame 76 and Camera 2 Video Frame 78 before and after RANSAC

Figure 8. Feature Correspondence Between Camera 1 Video Frame 86 and Camera 2 Video Frame 88 before and after RANSAC

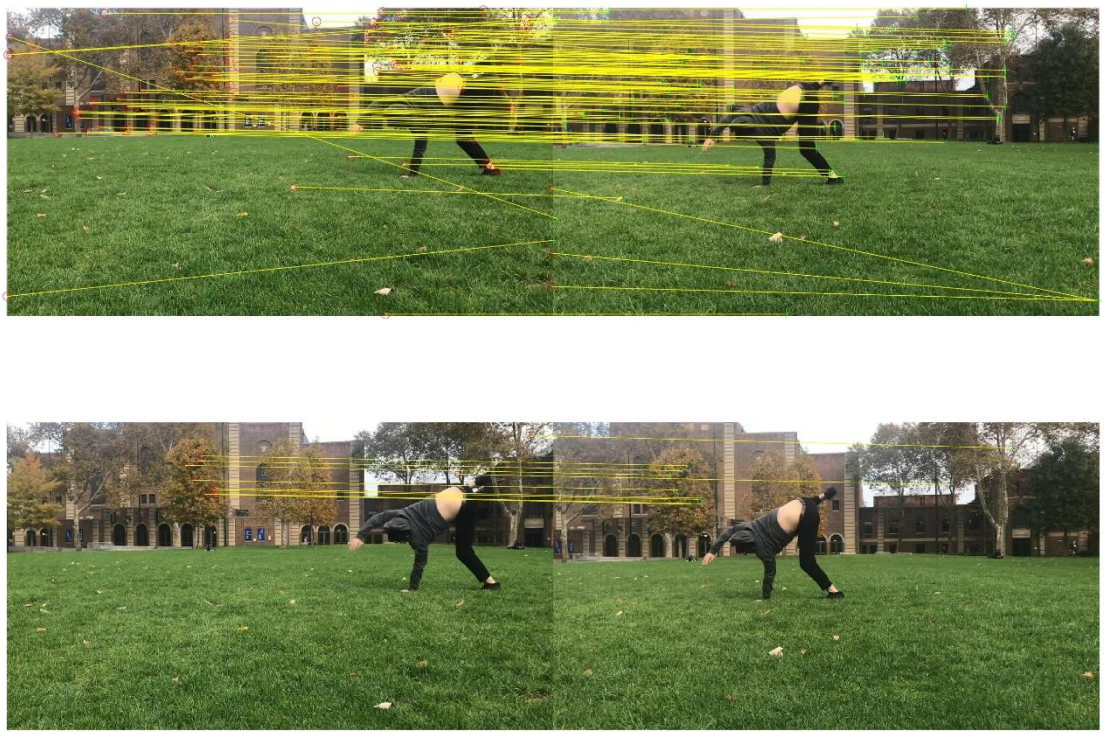

Figure 9. Feature Correspondence Between Camera 1 Video Frame 96 and Camera 2 Video Frame 98 before and after RANSAC

Figure 10. Feature Correspondence Between Camera 1 Video Frame 106 and Camera 2 Video Frame 108 before and after RANSAC

As is seen in Fig.6-Fig.10, after RANSAC we can get rid of all the wield correspondence features.

3. Stitching three pictures in 3 camera videos

Figure 11. Stitching of pictures in Camera 1 video frame 106, camera 2 video frame 108 and camera 3 video frame 99 into camera 2's coordinate frame before blending.

As is shown in Fig.11, we stitch together Camera 1 video frame 106, camera 2 video frame 108 and camera 3 video frame 99 into camera 2's coordinate frame before blending.

Figure 12. Stitching of pictures in Camera 1 video frame 106, camera 2 video frame 108 and camera 3 video frame 99 into camera 2's coordinate frame after blending.

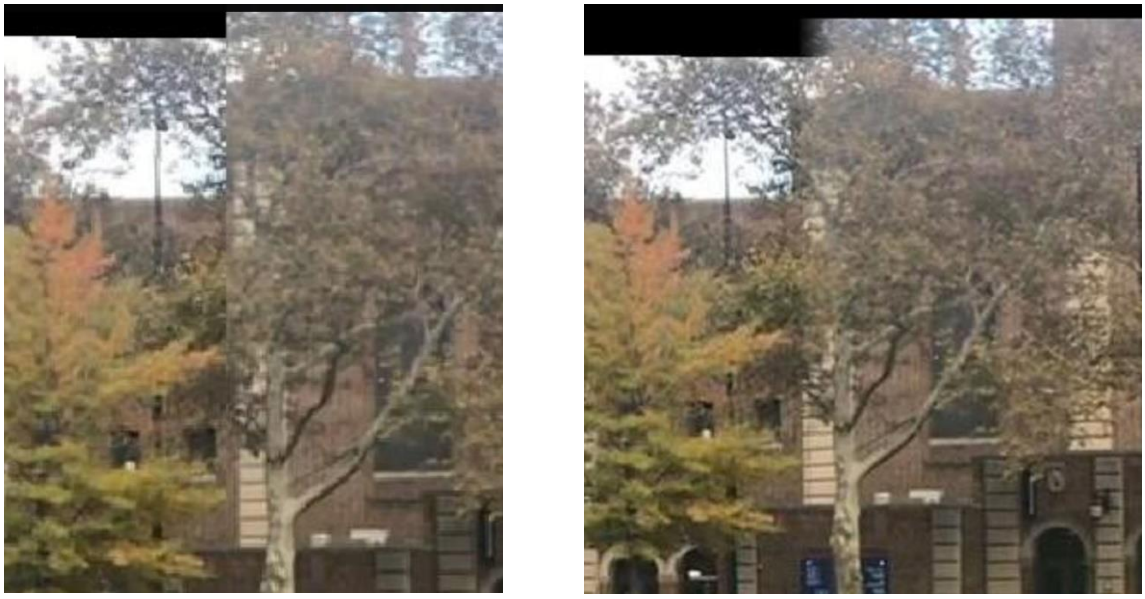

Figure 13. Comparison around the stitching edge before and after blending

As is shown in Fig.12 and Fig.13, we use alfa channel blending around the stitching edge, and the originally abrupt stitching between different pictures become more natural and contious.