

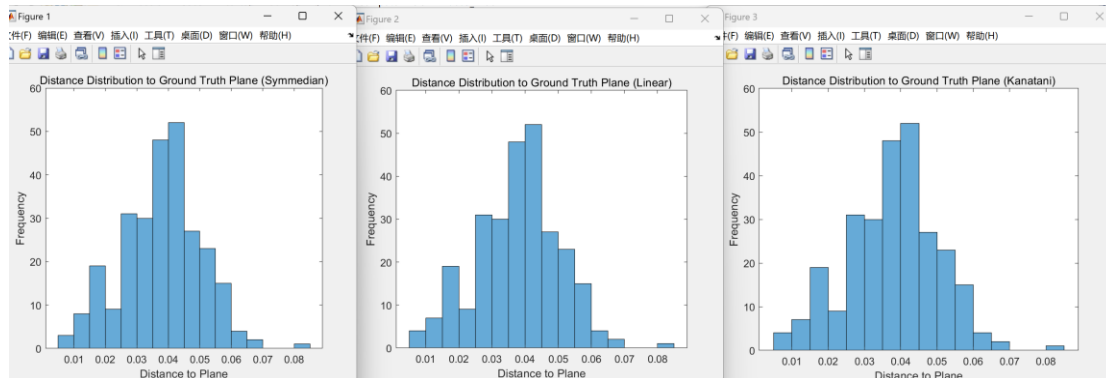
ENGN 2560

Lab #03 3D Reconstruction and Bundle Adjustment

Zhuo Wang

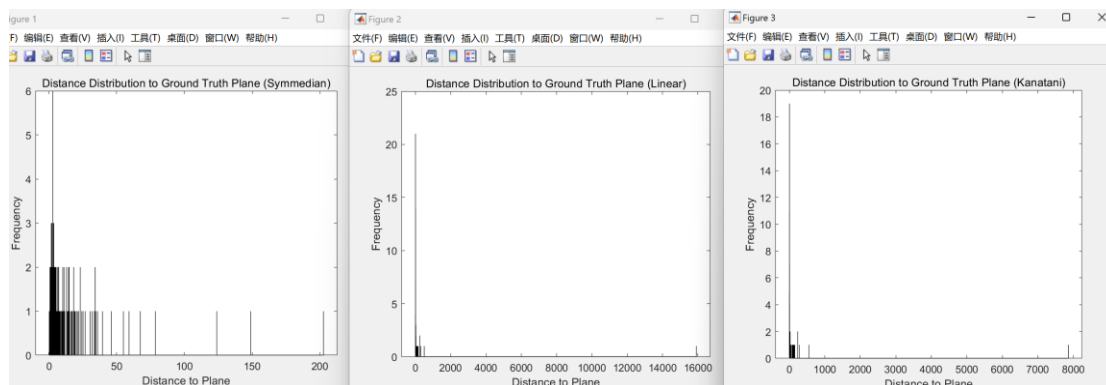
Problem 1. Reconstruction by Triangulation

The code for this result is in “P1_main.m” file.



(RANSAC_ITERATIONS = 3000;)

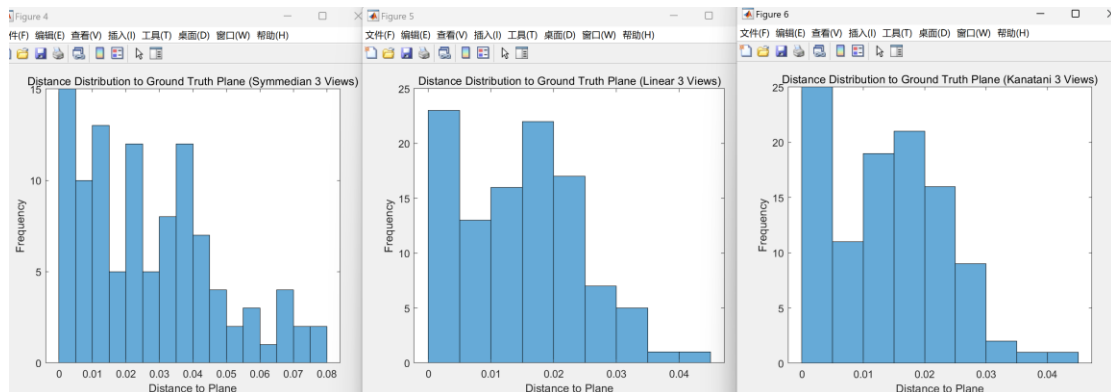
Try to decrease the RANSAC iterations so that the pose is not very accurate, and triangulate inlier features again. Which triangulation method is more robust to noisy poses?



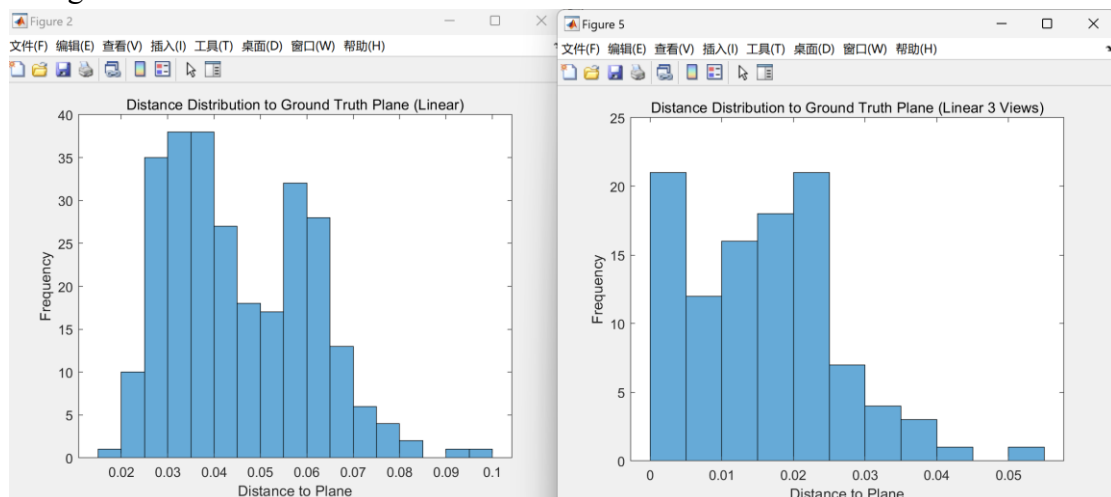
(RANSAC_ITERATIONS = 200;)

Symmedian Point triangulation method is more robust to noisy poses.

Extending Two Views to Three Views



When the number of iterations is relatively low, the 3 views can significantly improve triangulation.



Problem 2. Bundle Adjustment

The code for this result is in “P2_main.m” file.

