Parsa Pourzargham

Neptun ID: LUM2CE

LO\_RANSAC plane fitting

Overall process:

1-Reading the .xyz file to obtain points in 3d.

2-running the RANSAC algorithm on the point cloud to find the most dominant plane.

3-running the LO\_LSQ for the local optimization.

4-writing the output file for visualization in meshlab.

Notes:

1. The output file is a .txt file with the (X Y Z R G B) format to distinguish the most dominant plane from the point cloud (the found plane is represented in yellow color and other points are represented in blue).
2. As the local optimization is supposed to decrease the error in the obtained plane, the two average errors are shown in a snapshot called ***LSQ vs RANSAC error comparison.png***
3. the output xyzRGB files, as well as snapshots of the files in Meshlab can be found in file Output.rar