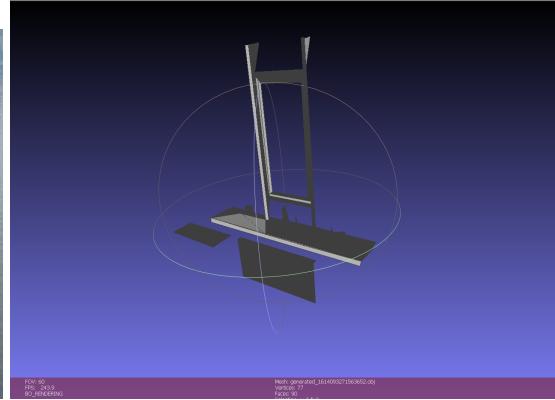
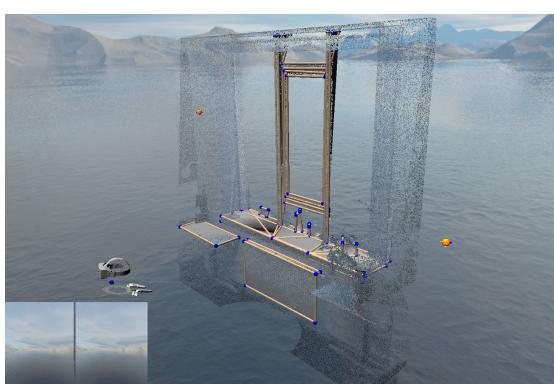


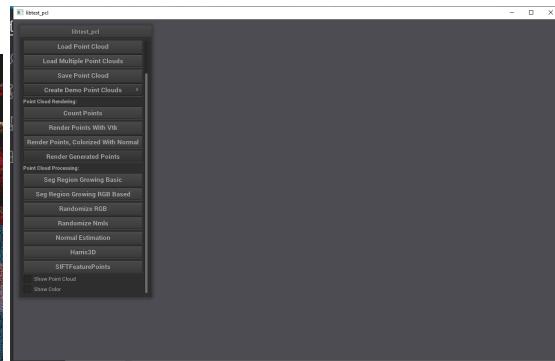
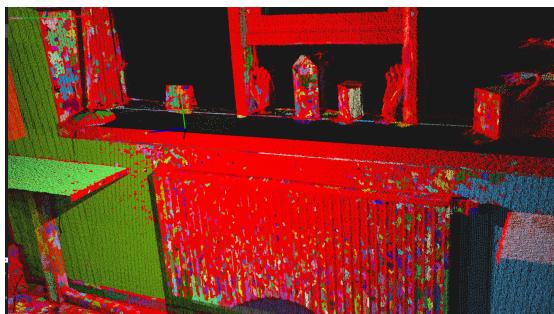
mixed.md

weekly report: 28/02/2021

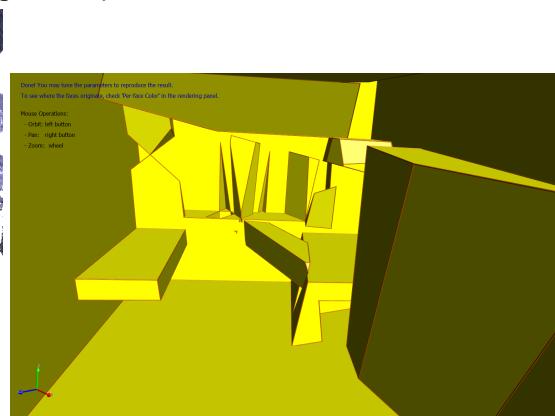
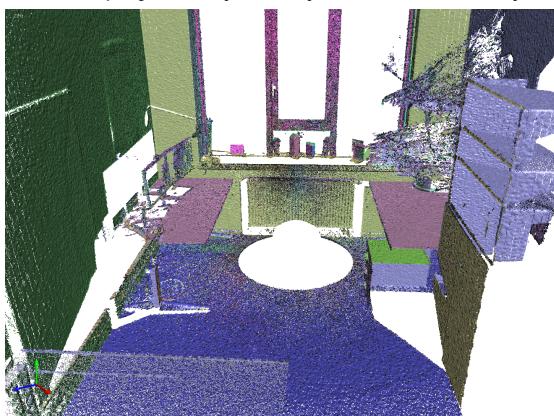
- Fit to low poly model
 - vr modeling with feature points clicked manually



- functionalities: add feature points, add faces by clicking points in some order
- Features of a point cloud
 - Taken a look at some tutorials on feature computation, with the PCL library



- Fit to low poly model:
 - Tried the project: PolyFit, only work with carefully segmented point clouds, which we do not have now, skip for now

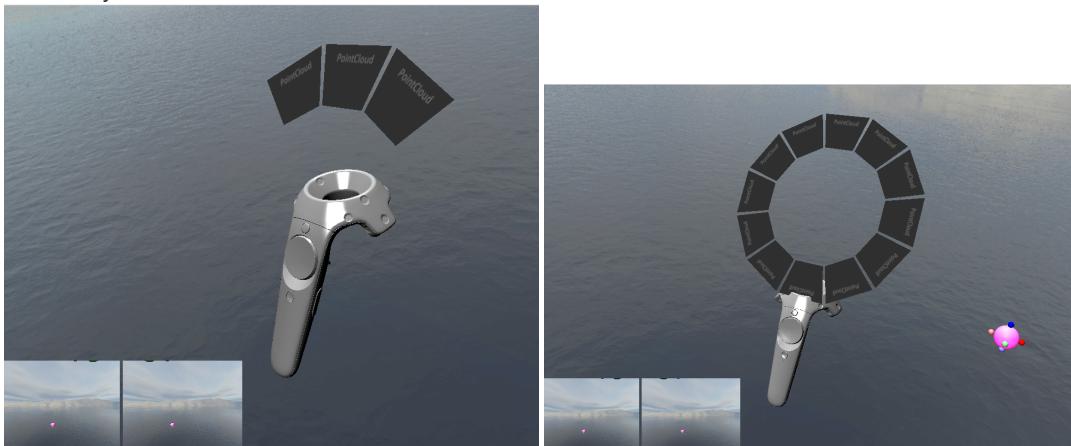


weekly report: 21/02/2021

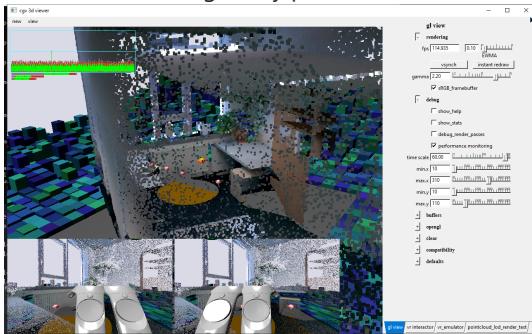
- Point Cloud Merging:
 - Merged building scale point cloud

- Surface Reconstruction:

- Tried the code from the paper: Instant Field-Aligned Meshes after reading the paper "The Replica Dataset: A Digital Replica of Indoor Spaces"
 - Does not support reading from point clouds originally, the algorithm supports
- Found a fork that supports this, not working well as the following one
- Tried the code from the paper: Field-aligned online surface reconstruction
 - Works with small scene, takes too long time for large scene reconstruction
 - Has a relative good mesh and visual effect, texture re-projection may be supported
- Worked for my thesis, a better GUI made



- Selective LOD Rendering of my point clouds made, sub and super sampling



- Texture Reconstruction:

- Familiar with the software: Reality Capture



- Actually does not support texture re-projection, only supports from one model to another, not what we need

- Prepare .e57 file with correct header, feed to RC

- // Point cloud can not be loaded to RC after external edit, camera positions missing

- Tried to cure this issue with pye57 library, failed

- Tried to solve this problem with libe57Format, built successfully but the load of point clouds from sketch too complex, give up

- Tried to modify the source code of the software: CloudCompare, load camera positions from external file, success

- Literature Review

- Working hours: 10