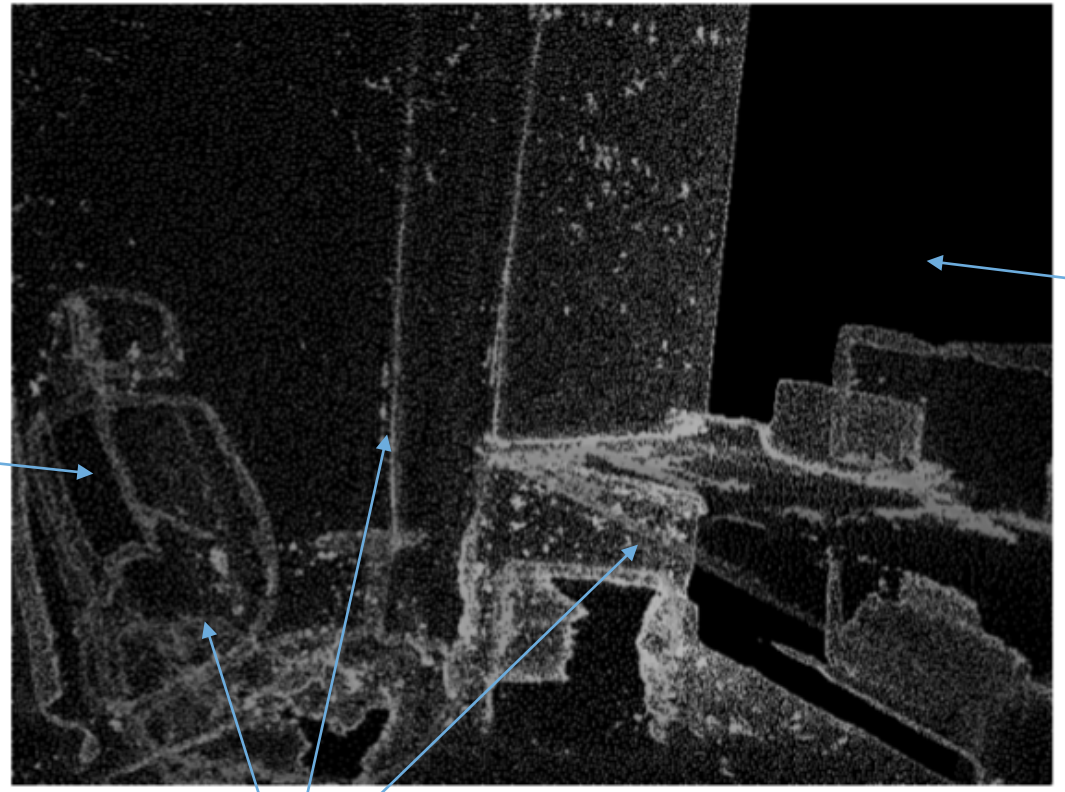
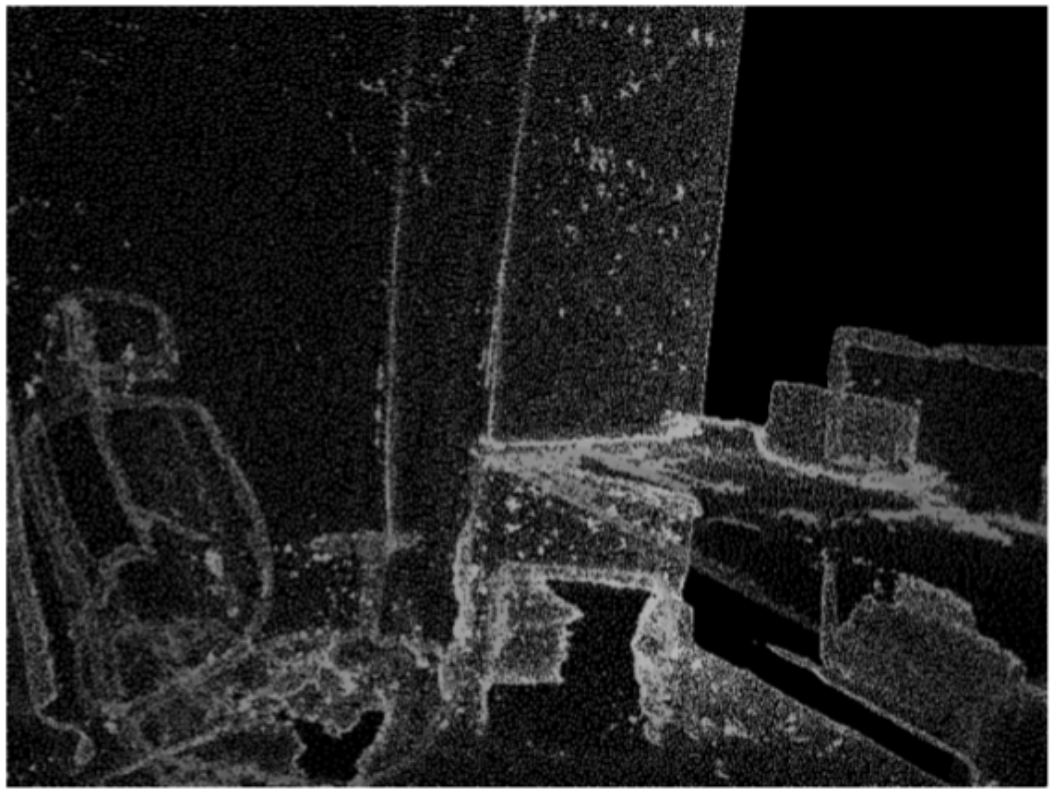
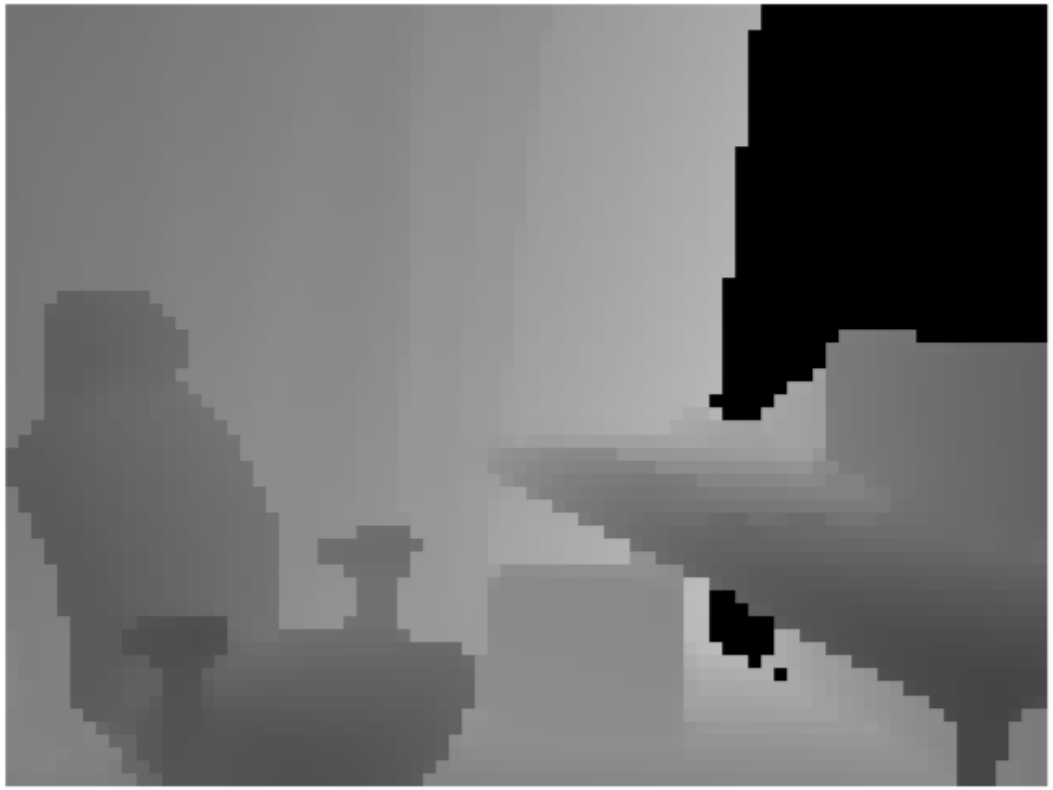
Three major issues



Idea





Problem?

Algorithm: pseudo code

Algorithm 1 RANGE IMAGES FROM POINT CLOUDS

Require: Point Cloud Ψ, Image stack S, range image Lr
Ensure: Densed range image Hr

1: **while** holes **do**
2: project Ψ to Lr using Z-buffering
3: find small holes in Lr
4: **if** holes **then**
5: $S \leftarrow$ push Lr into image stack
6: downscale Lr with factor 2
7: **end if**
8: **end while**

9: **while** S not empty **do**
10: $Hr \leftarrow$ pop image from S
11: resize Lr to the image size of Hr
12: remove strong edges from Lr
13: $Hr \leftarrow \min(Lr, Hr)$
14: $Lr \leftarrow Hr$
15: **end while**

16: fill in remaining small holes in Hr

a certain scale

fill the holes

preserve shapes

merging

Kernel: $[\blacksquare -1\&-1\&-1@-1\&1\&-1@-1\&-1\&-1\ ]$

Occlusion map

Bilinear filtering

K-means clustering in a foreground and background cluster