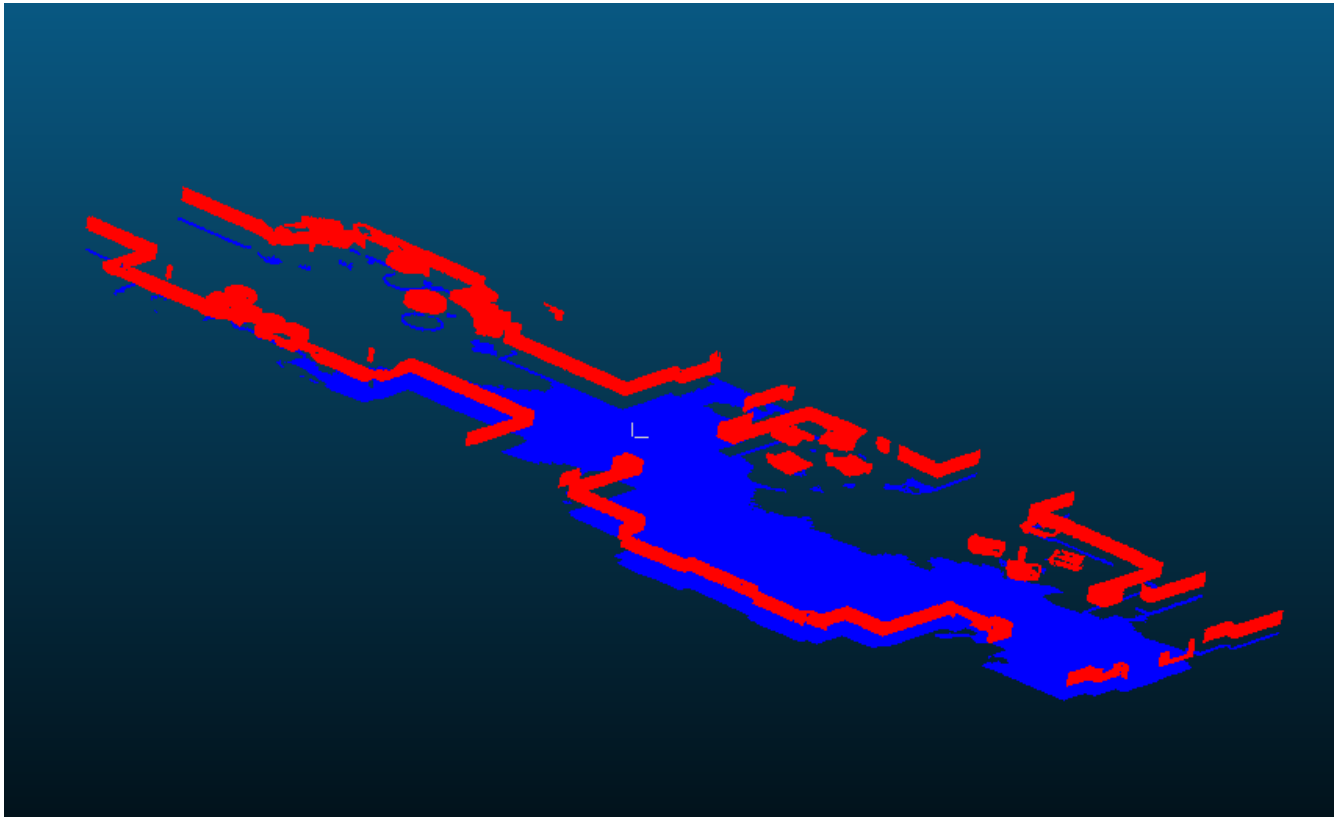


Question 1 :

After trying to do the first question on Linux, the Ransac algorithm crashed. It seems to be due to a bad alloc, and is referenced on github [here](#).

As I don't have Windows installed, I can't get the proper result.

Question 2 :



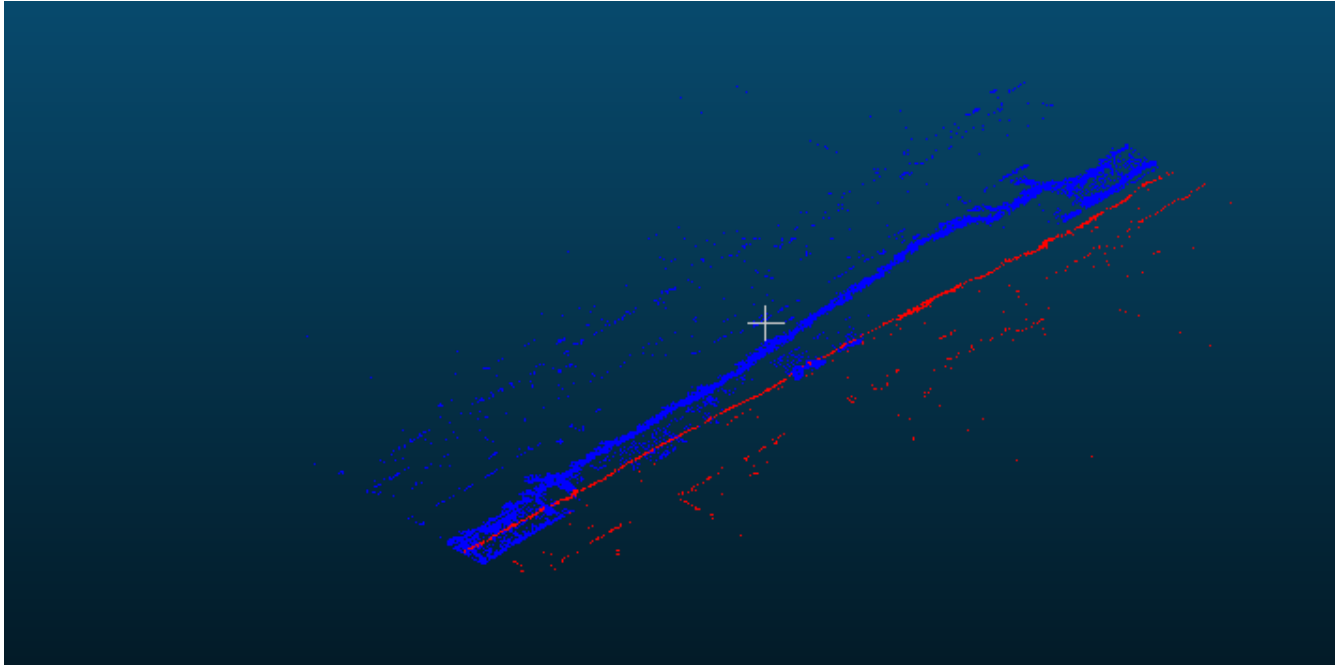
Question 3 :

The RANSAC algorithm doesn't take into account the proximity between the points : two similar planes at the opposite of each other in the point cloud will be considered as belonging to the same plane. We should take into account the contiguity of the planes we are detecting.

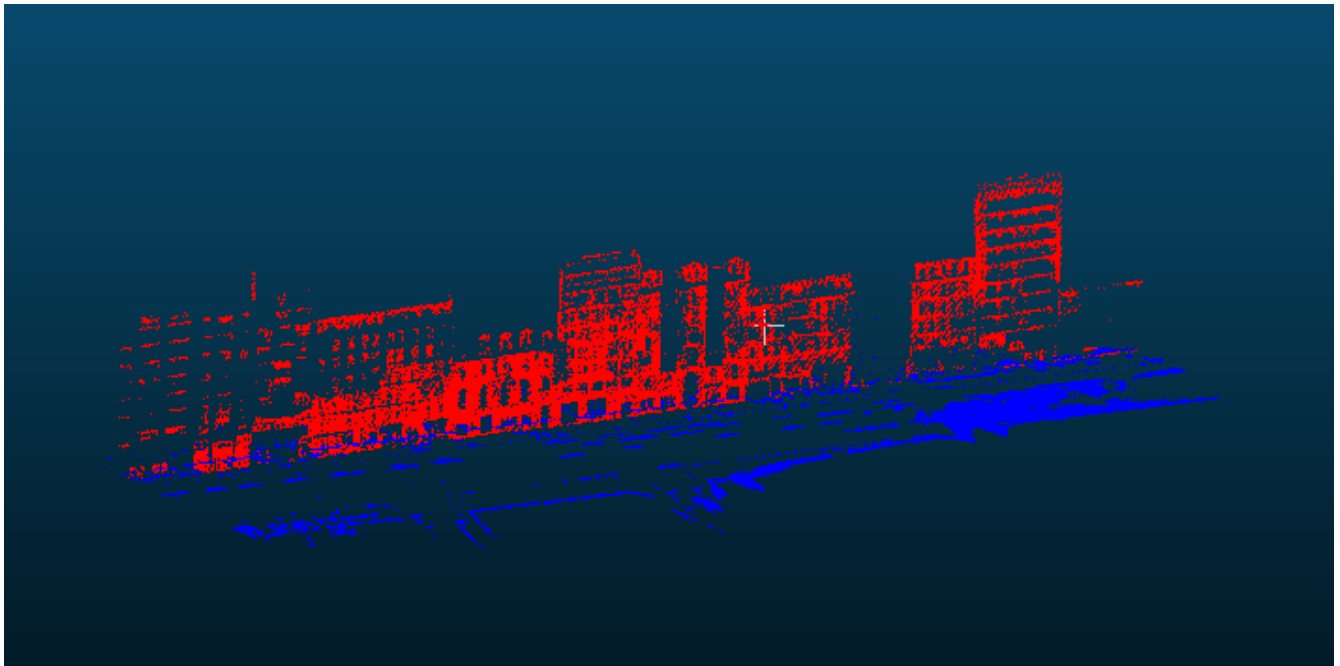
Question 4 :

I chose the Notre-Dame-des-Champs pointcloud.

If the threshold is too low, as the point cloud is noisy, we can't detect properly the planes.



With threshold = 0,5



On the Notre-Dame des Champs pointcloud, and with an increased threshold(=10), we obtain this result.

Bonus :

As I didn't have a precise way to test contiguity, I simply changed the distance function in order for it to take into account the distance to the point as well, in order to have more restrained planes.

However, the results didn't clearly improved.