



AGH



Hardware-software object detection system based on LiDAR and camera data fusion

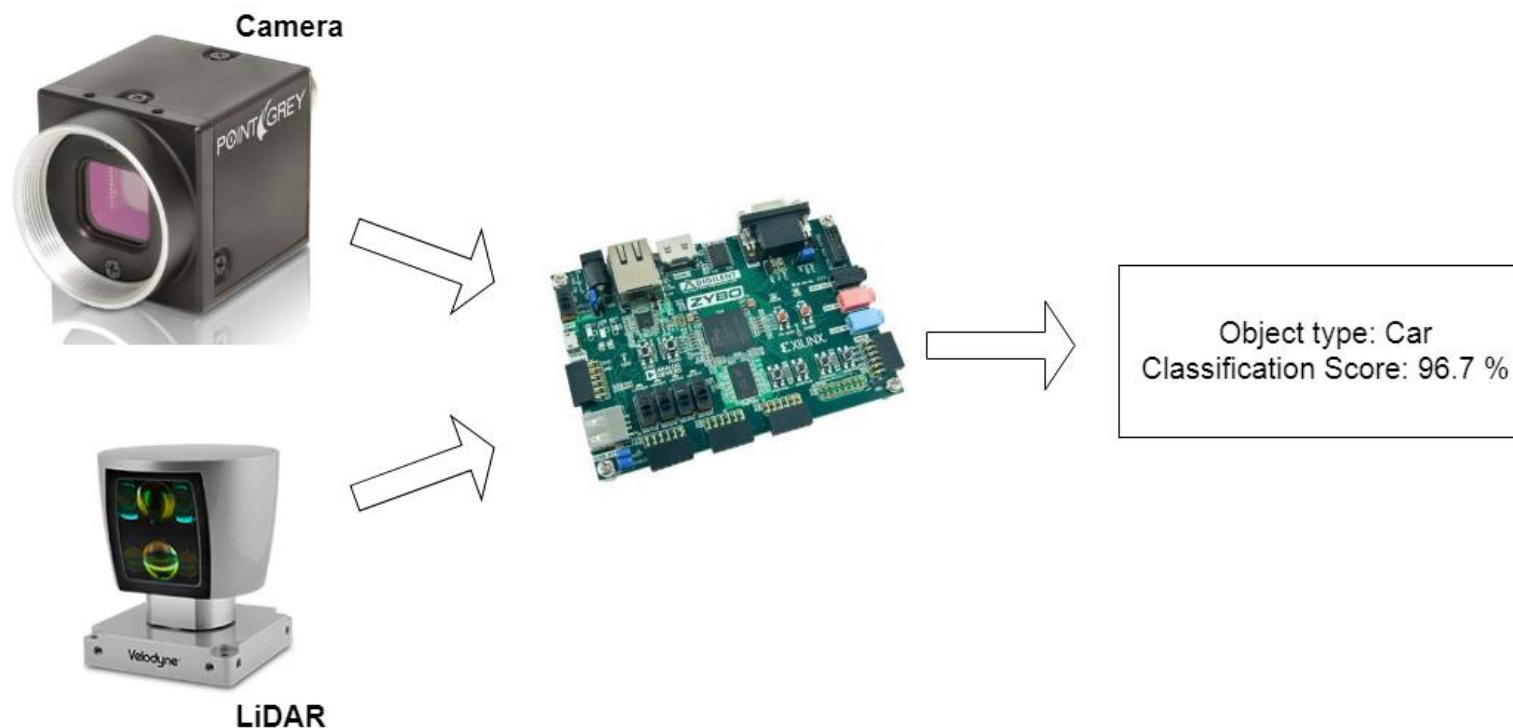
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Supervisor: PhD Tomasz Kryjak

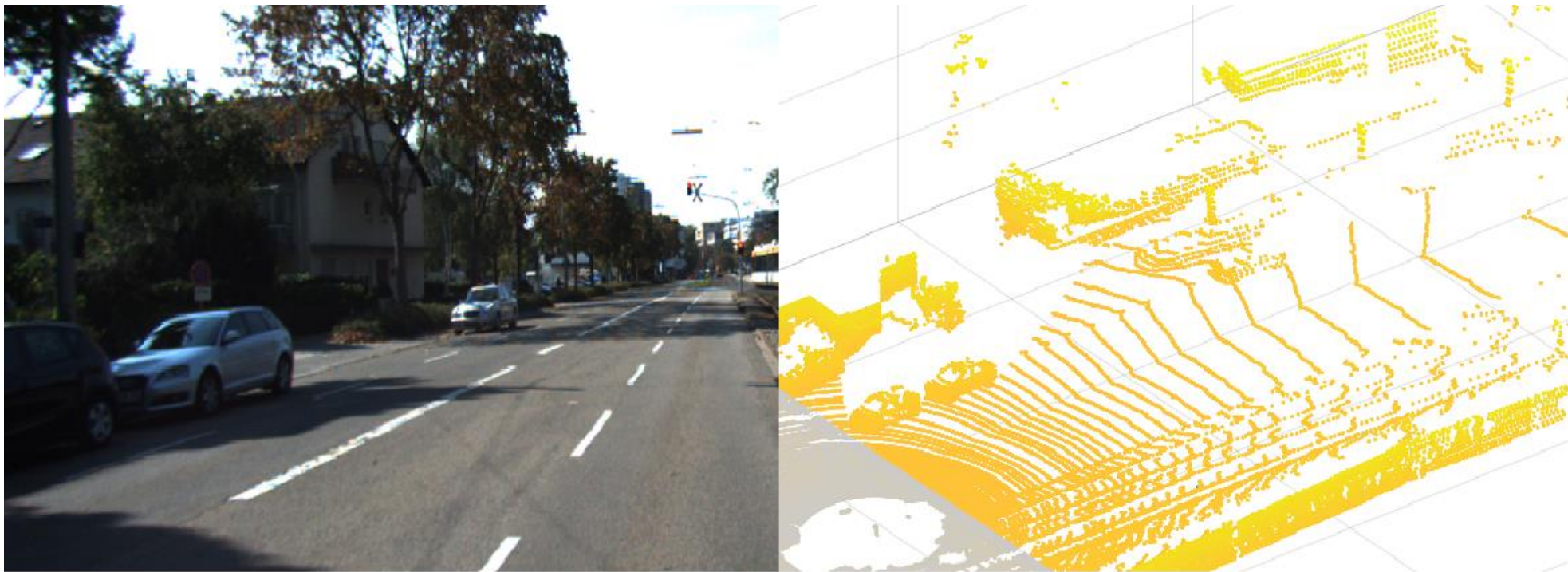


11.05.2019

1. The aim of this project

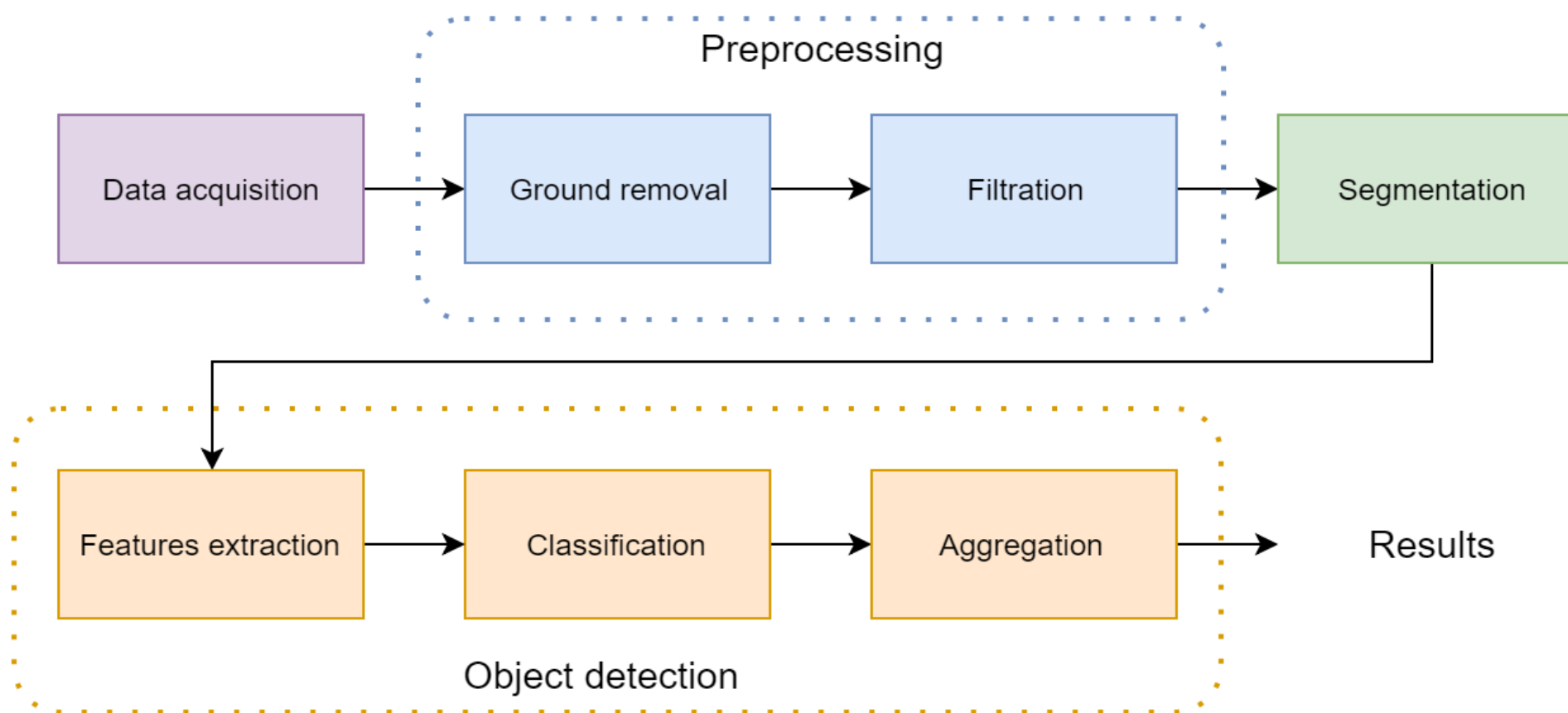
The aim of project is car detection system based on camera and LiDAR data, implemented on the heterogeneous platform.



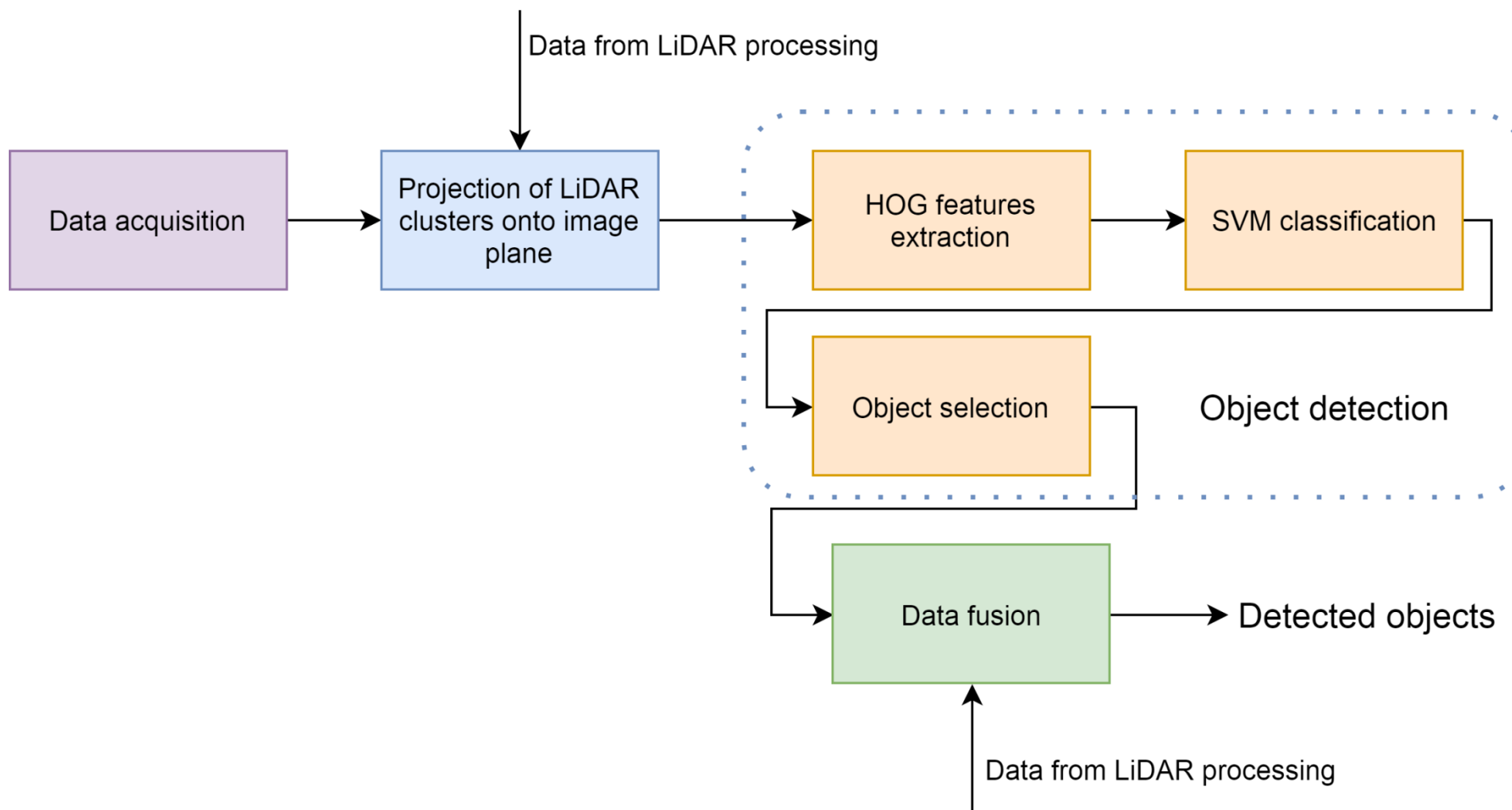


An example view of corresponding camera image on the left side and LiDAR point cloud on the right.

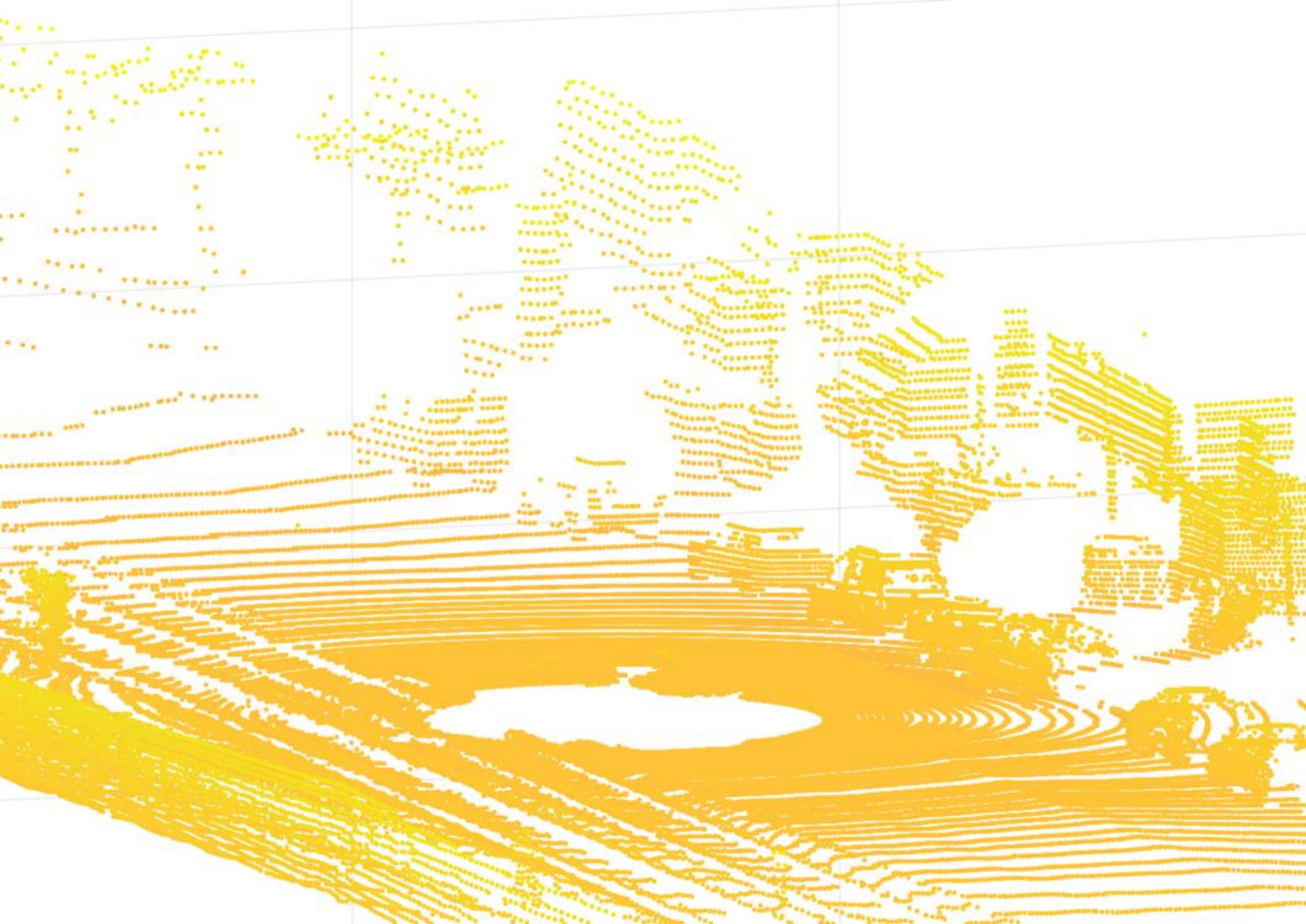
2.1. Theory

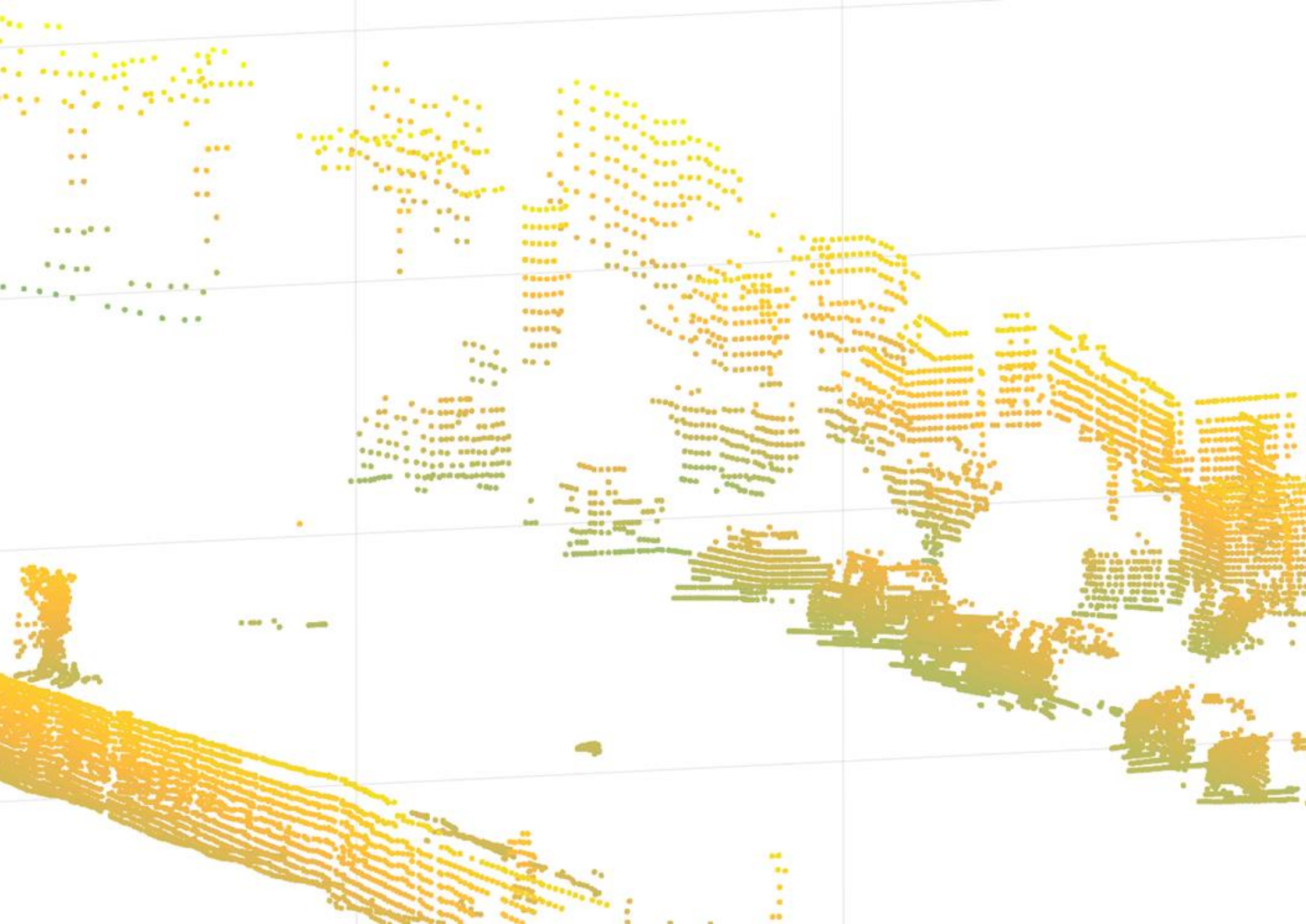


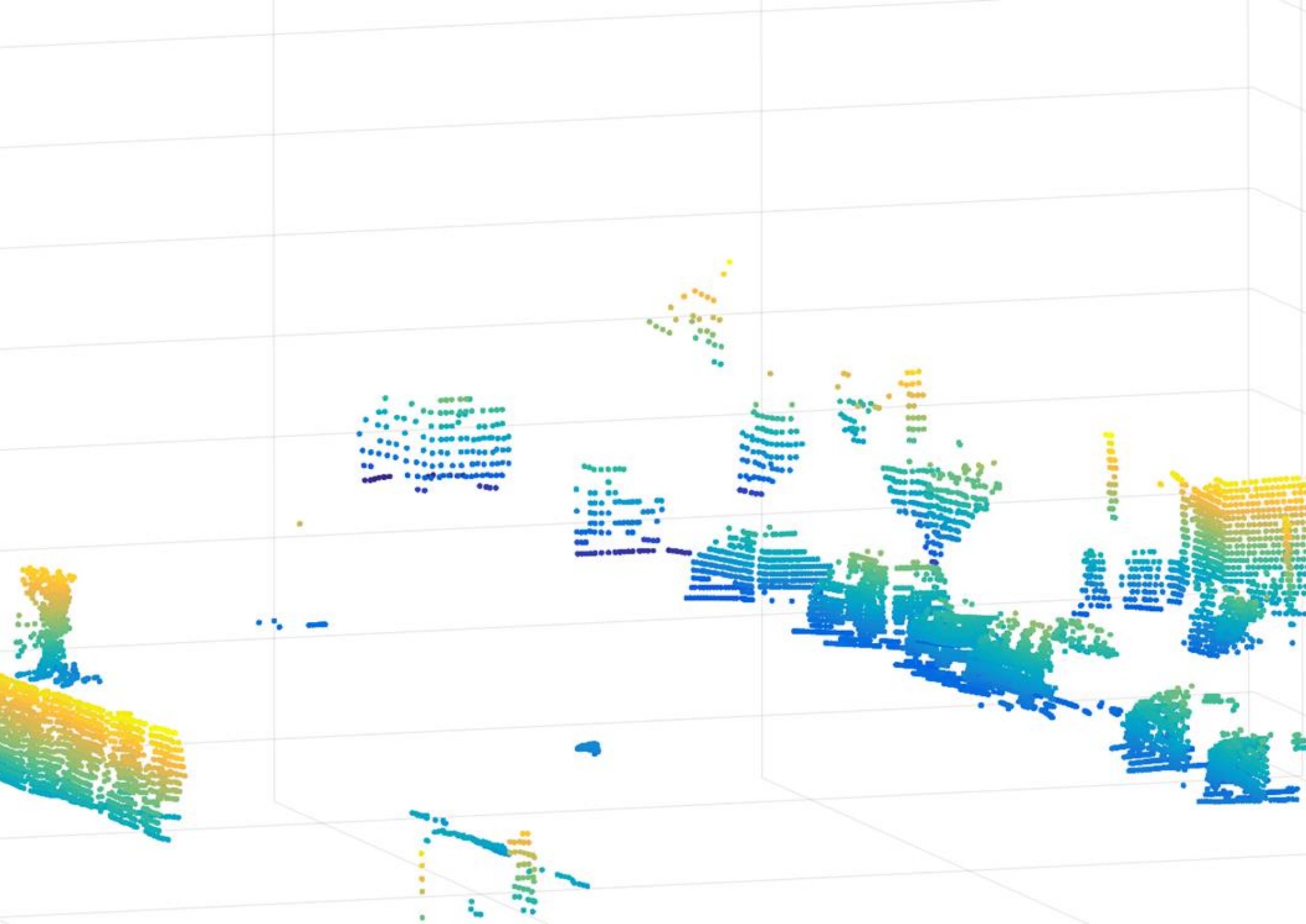
2.2. Theory

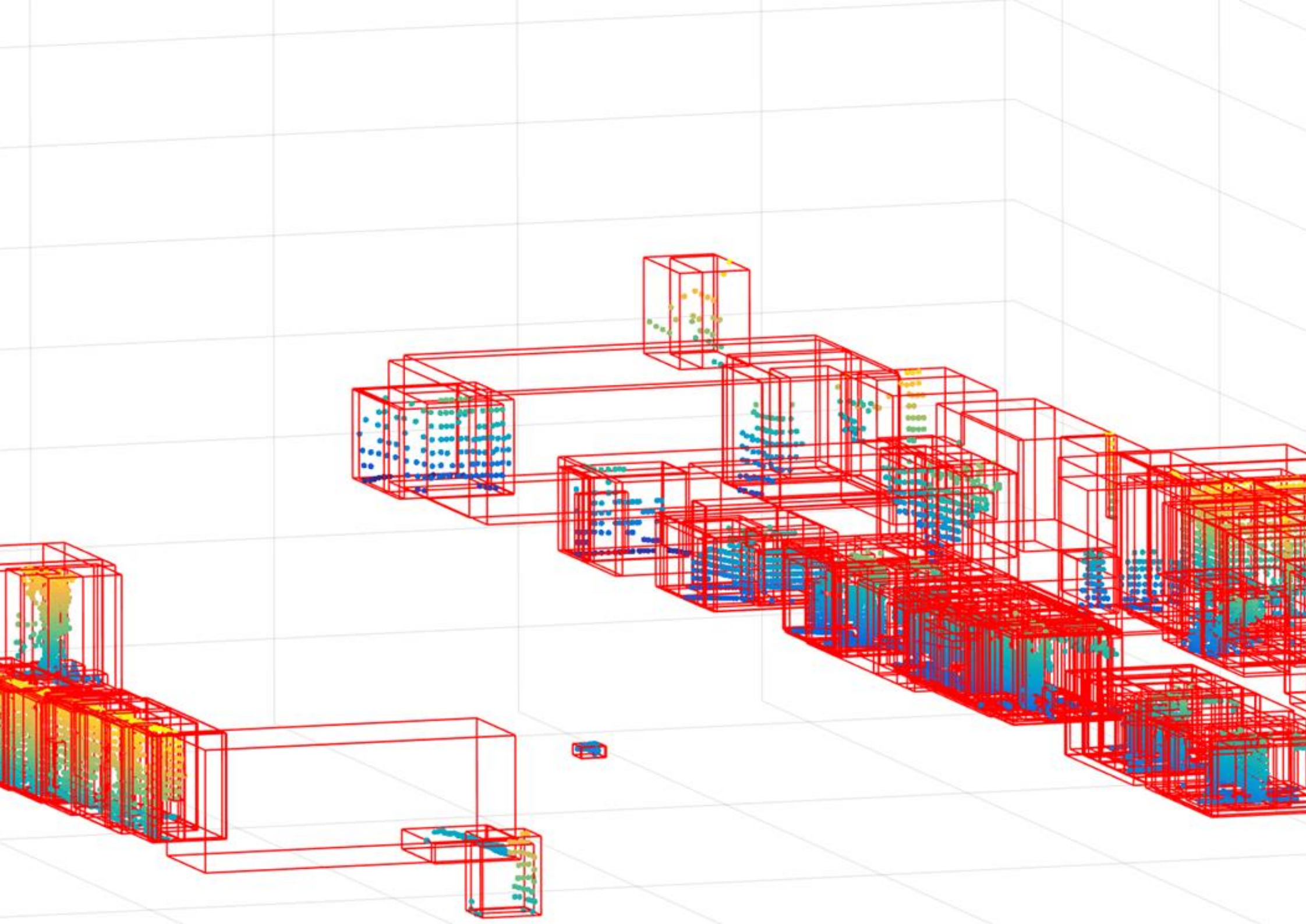


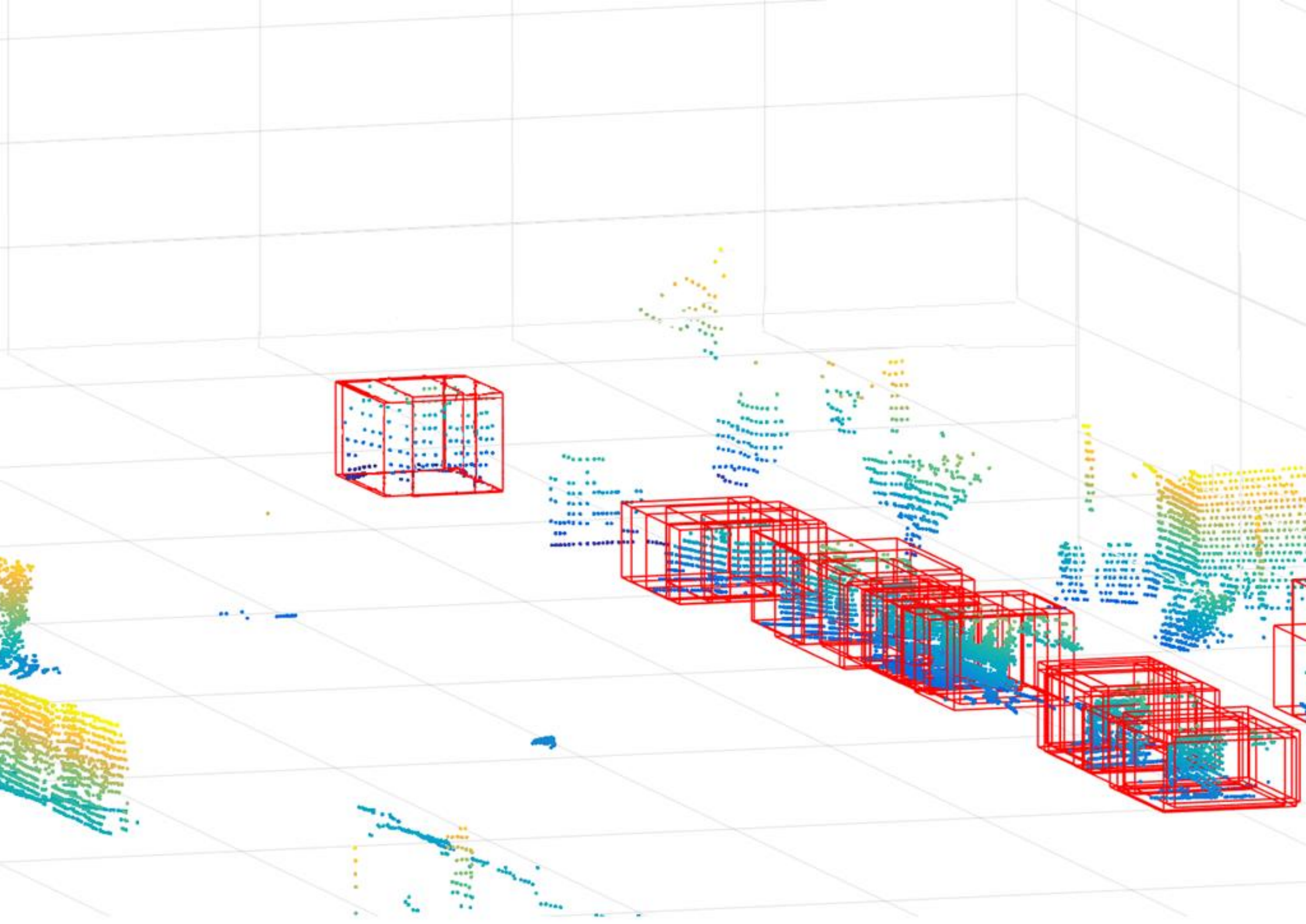
3. Results

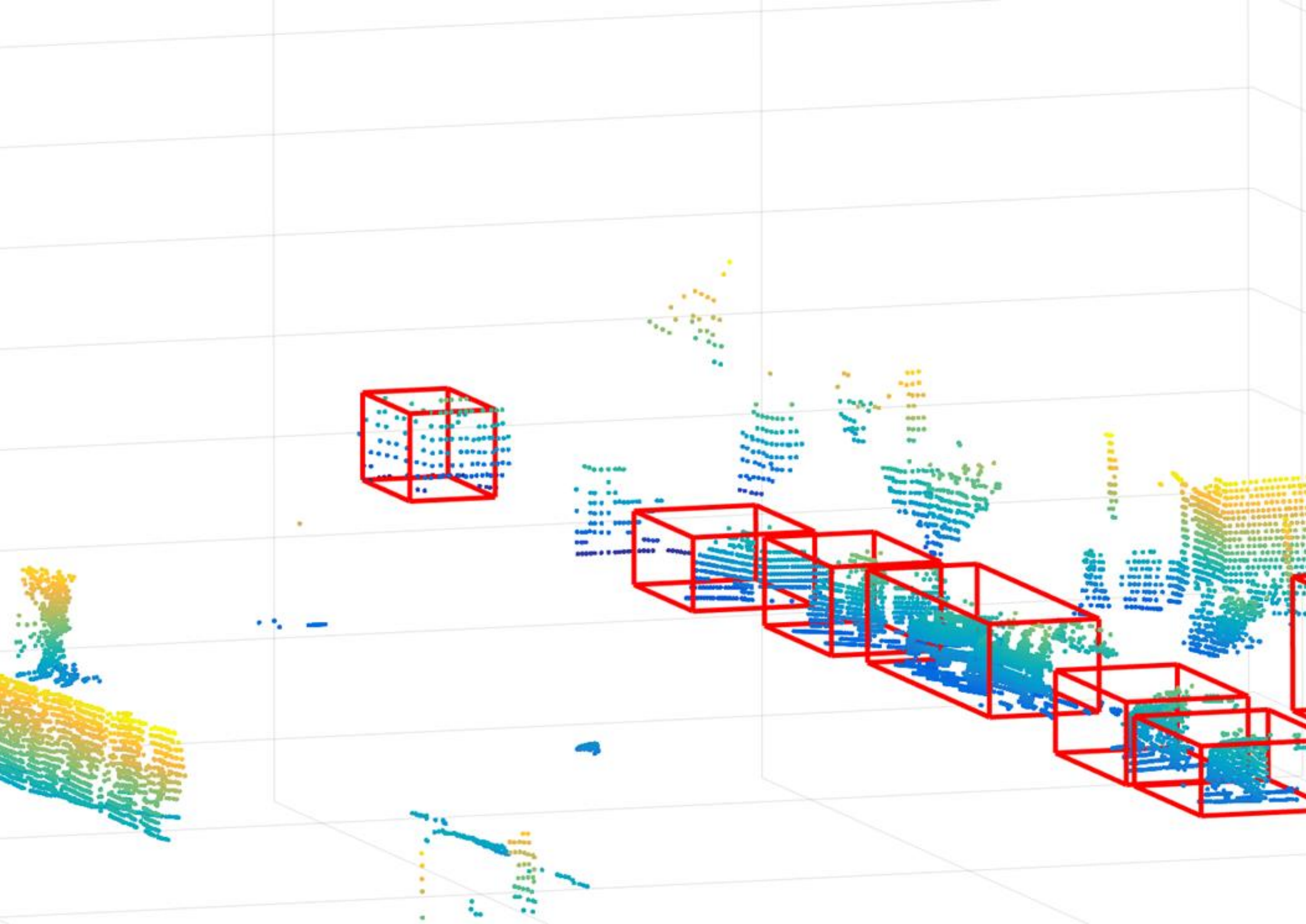












- » Then, the vision data processing should be performed.
- » It is done in software model, but not implemented on the target.



LiDAR clusters projected on image plane



Clusters classified as cars based on LiDAR data



Clusters classified as cars based on camera data



Data fusion result

- » As you can see, data fusion has some potential
- » However, today we will be able to present you only classification results from LiDAR data

DEMO



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Thanks for watching!



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DESIGN CONTEST