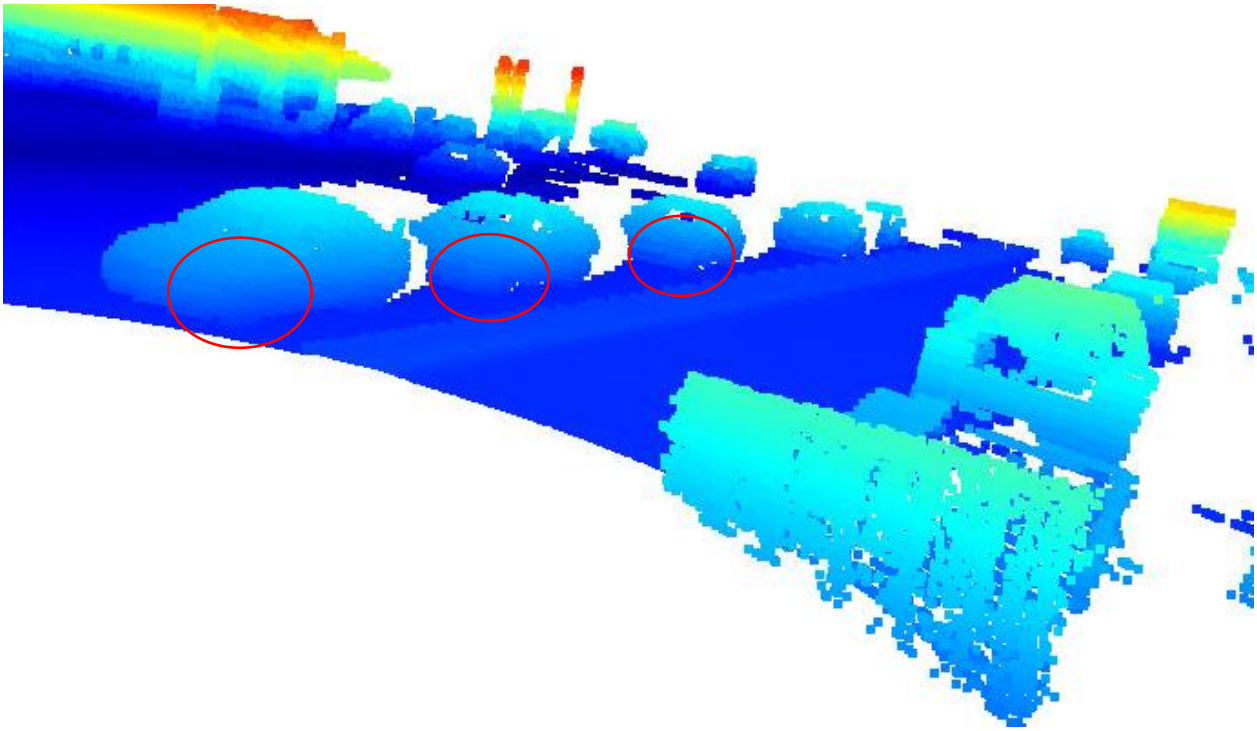
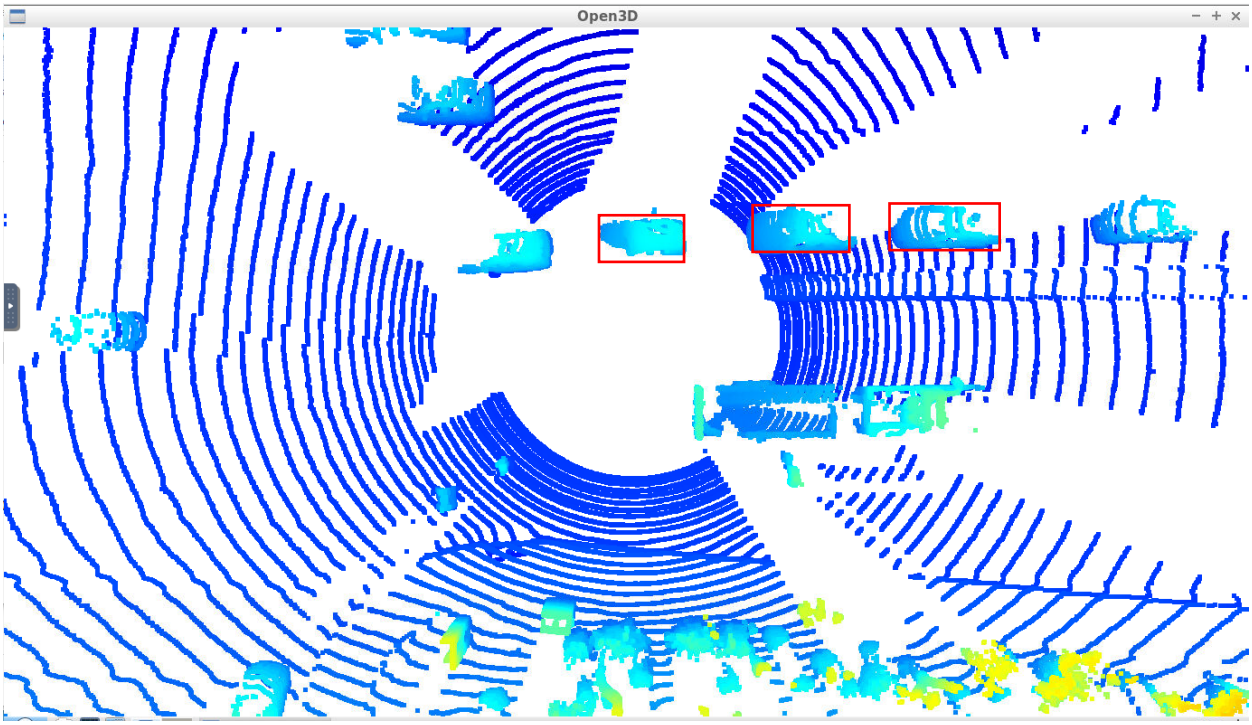
10 different viewing angles:

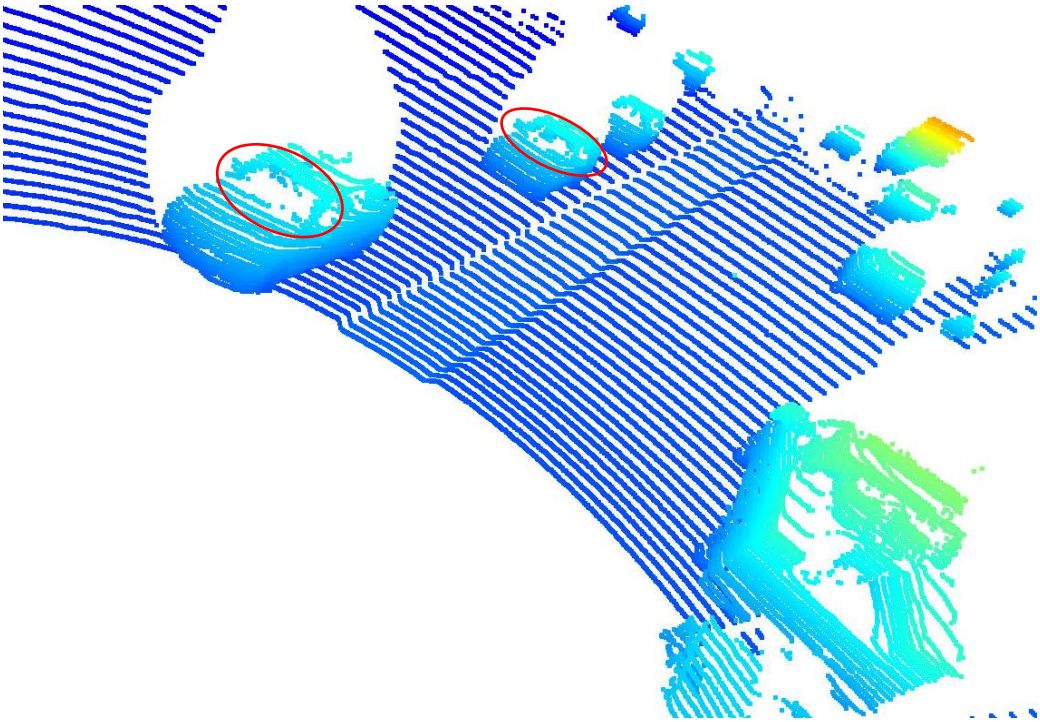
1. Similar front bumper shape.



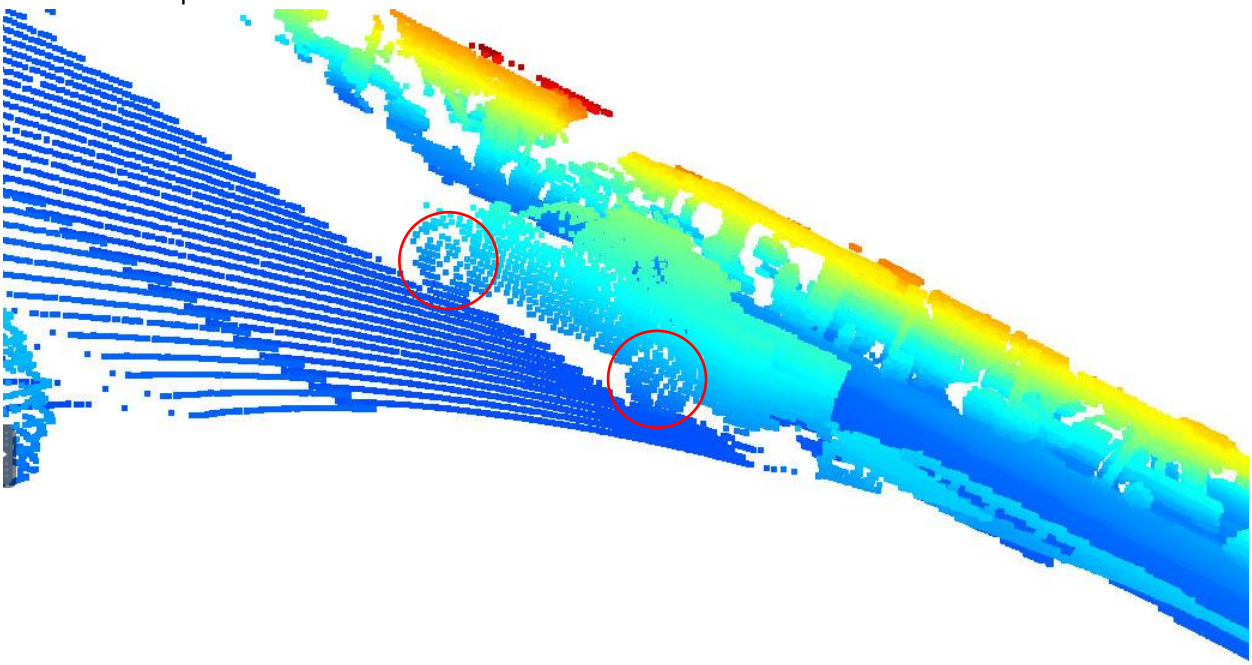
2. Similar birds eye view shapes.



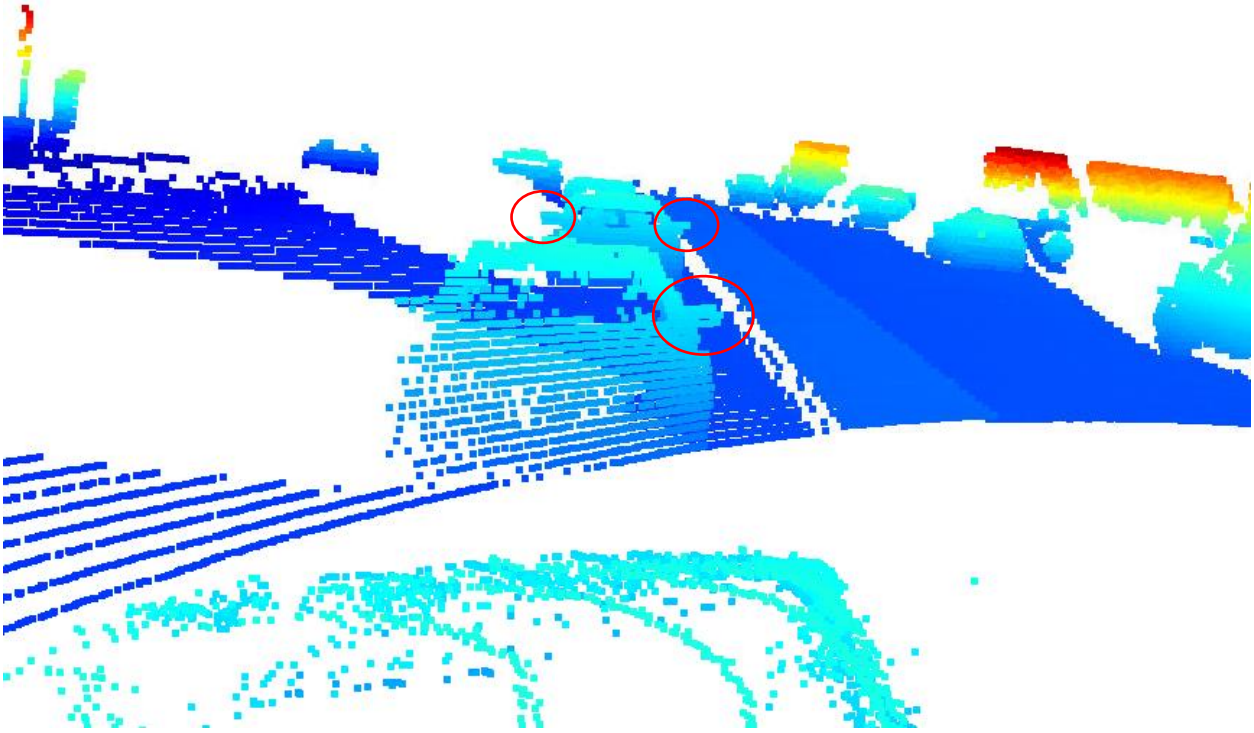
3. Similar front side windshield view



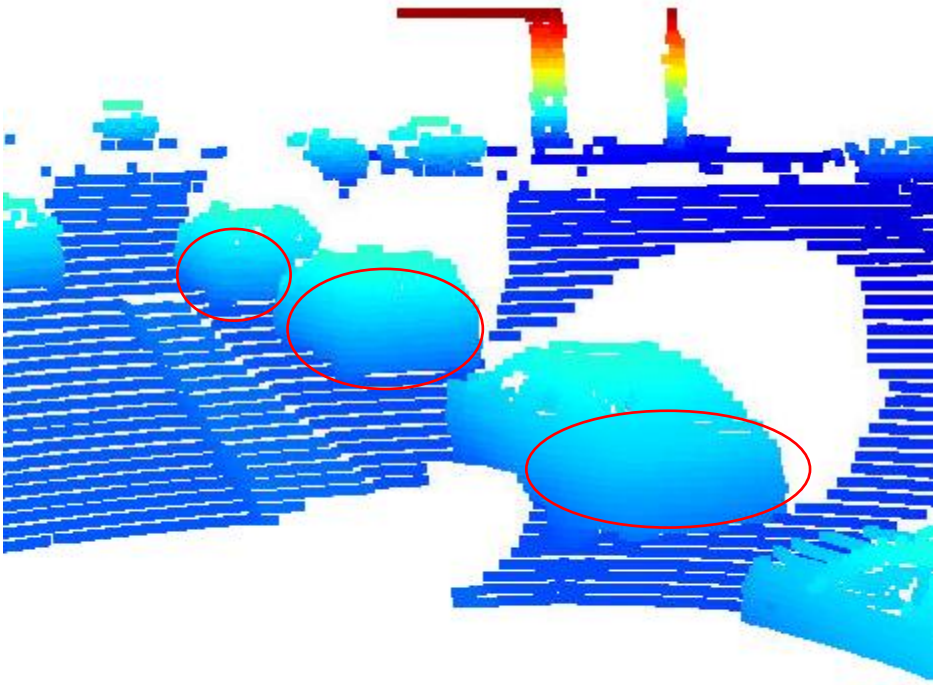
4. Similar tire shapes



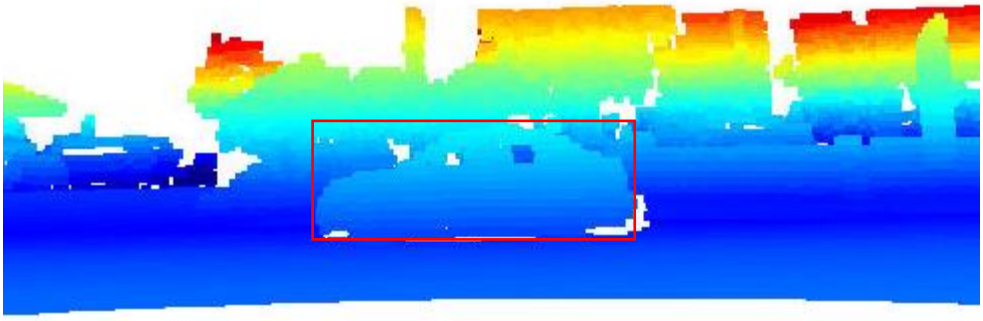
5. Similar side mirror shapes



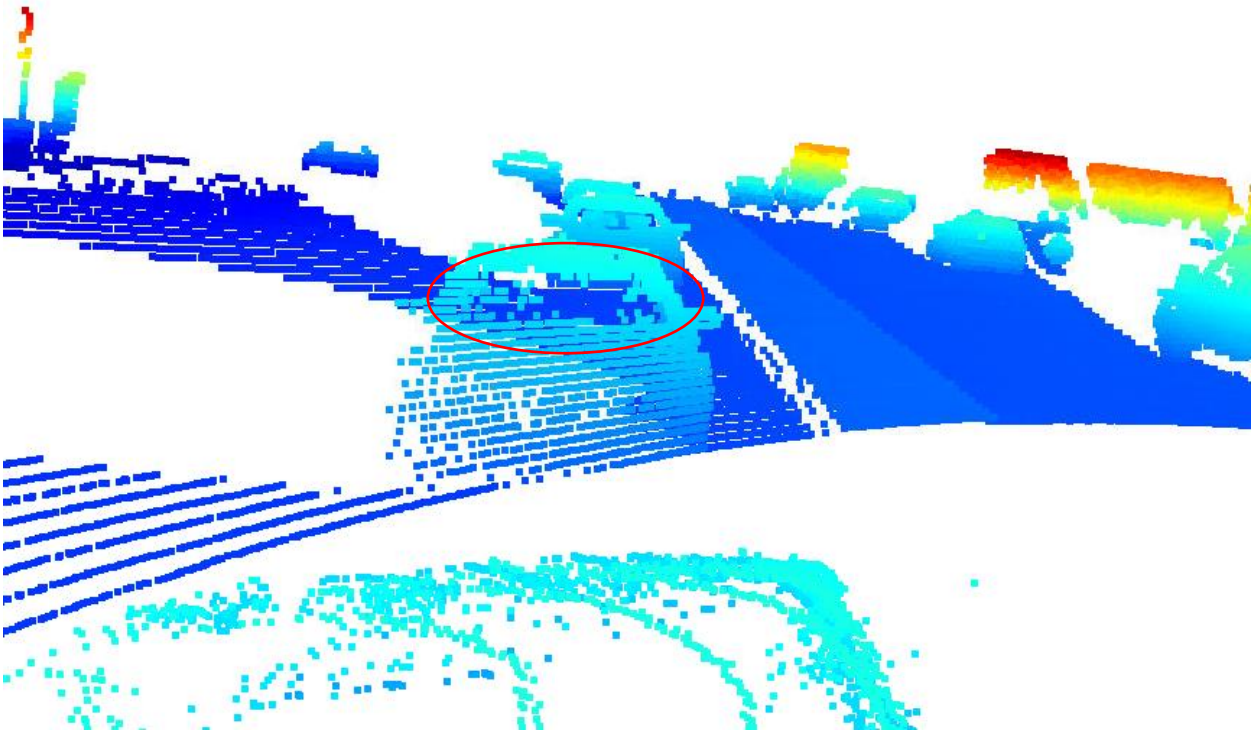
6. Similar rear bumper shapes



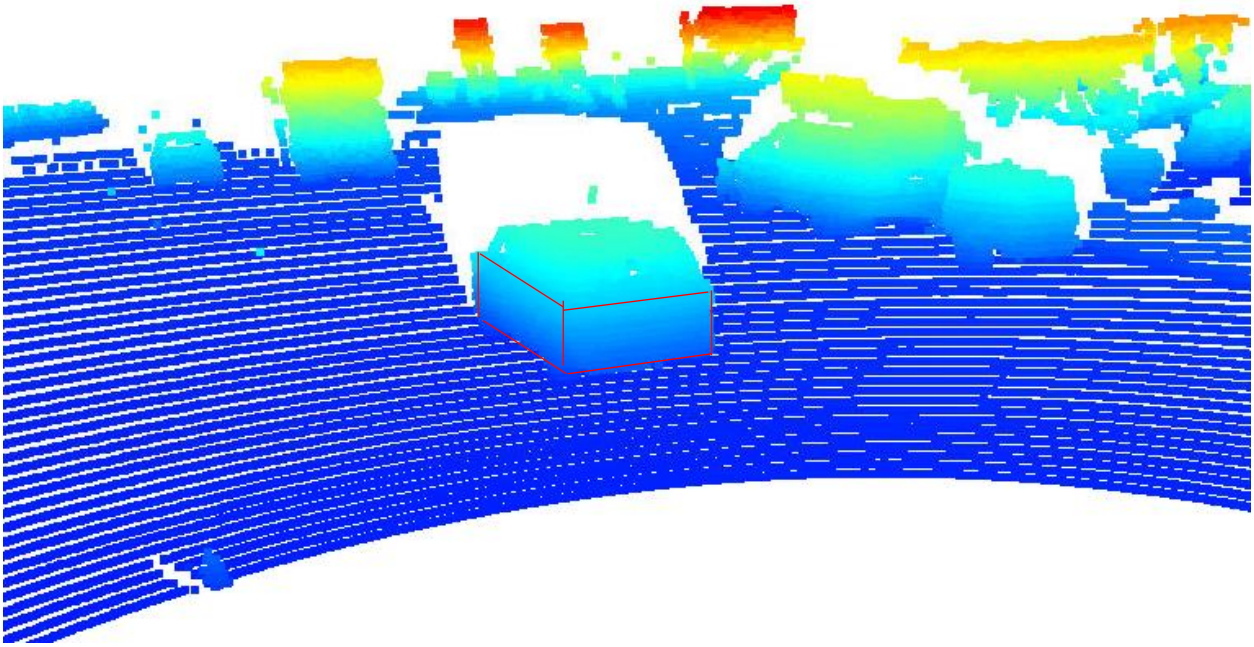
7. Similar shape of side view



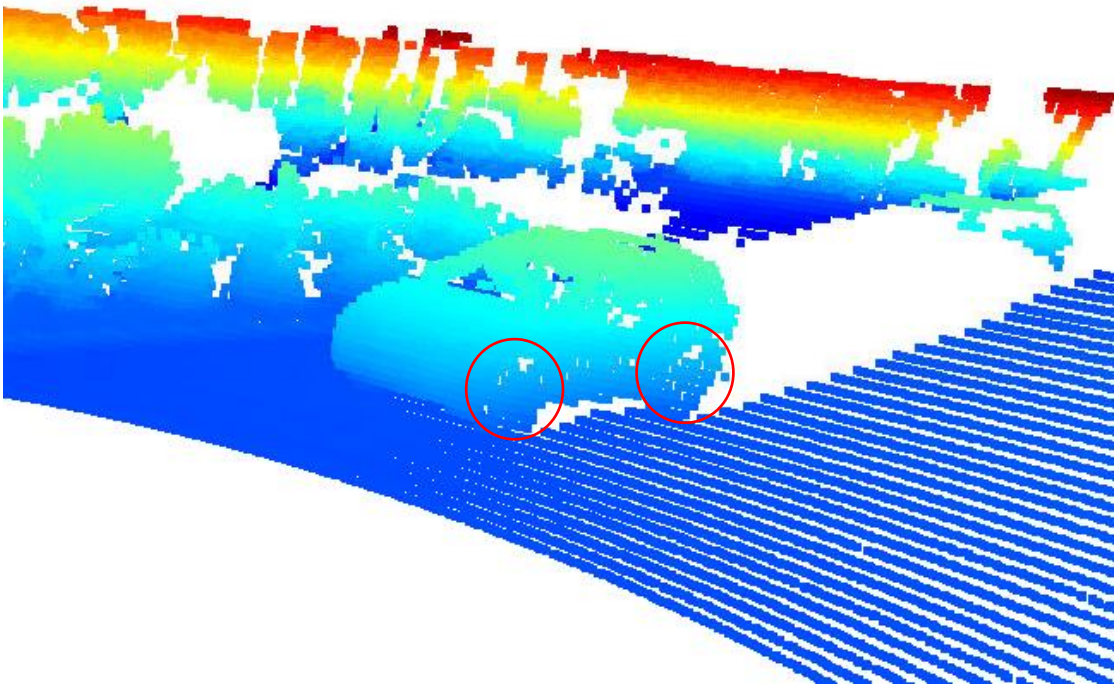
8. Similar front side windshield



9. Similar rear view car shape

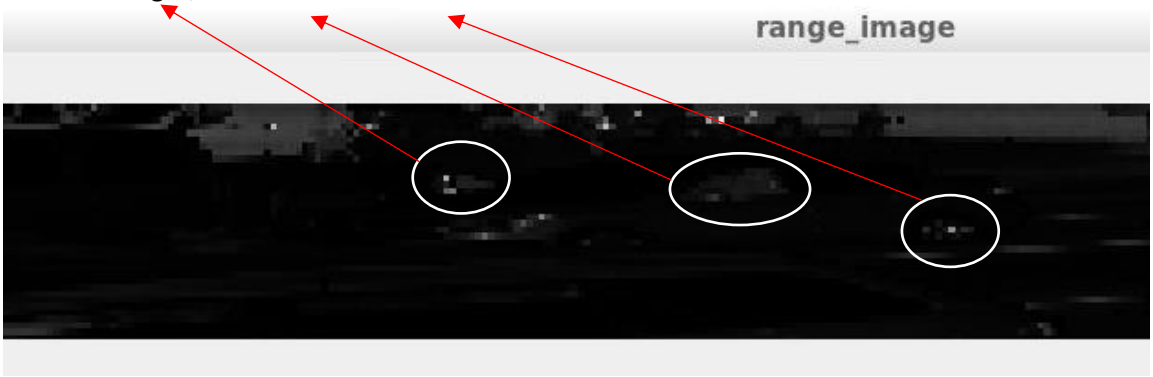


10. Similar front view of tires



11. Strong tail light reflection intensity

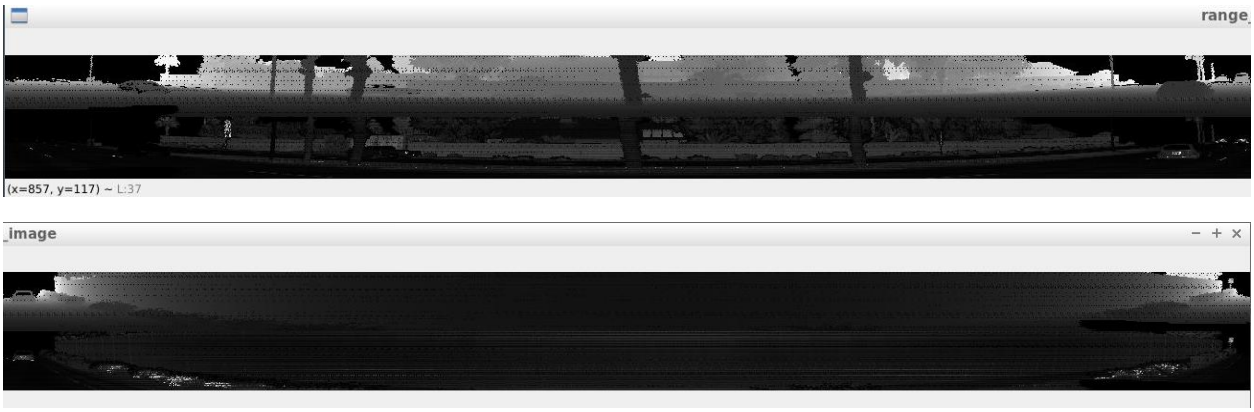
12. Clear head light, side window and tire rim



13. Strong head light and clear front side view of car frame

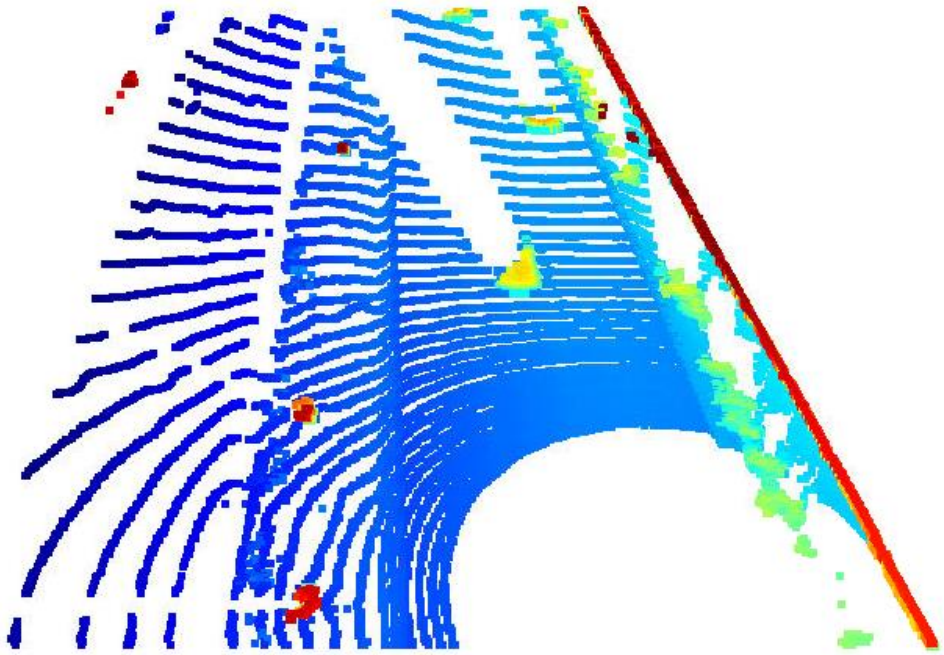
ID_S1_EX1:

Range image



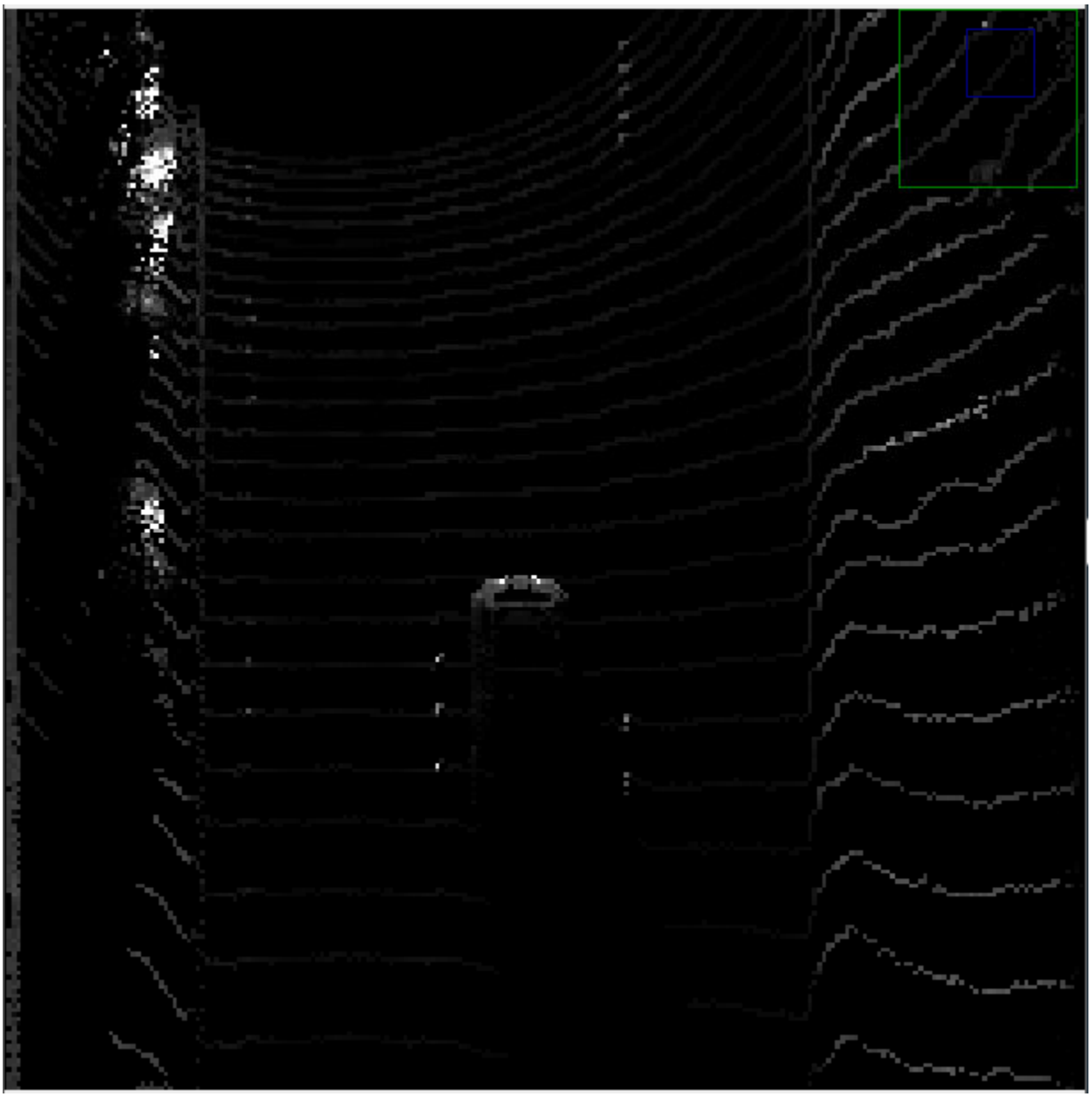
ID_S2_EX1:

BEV map coordinates



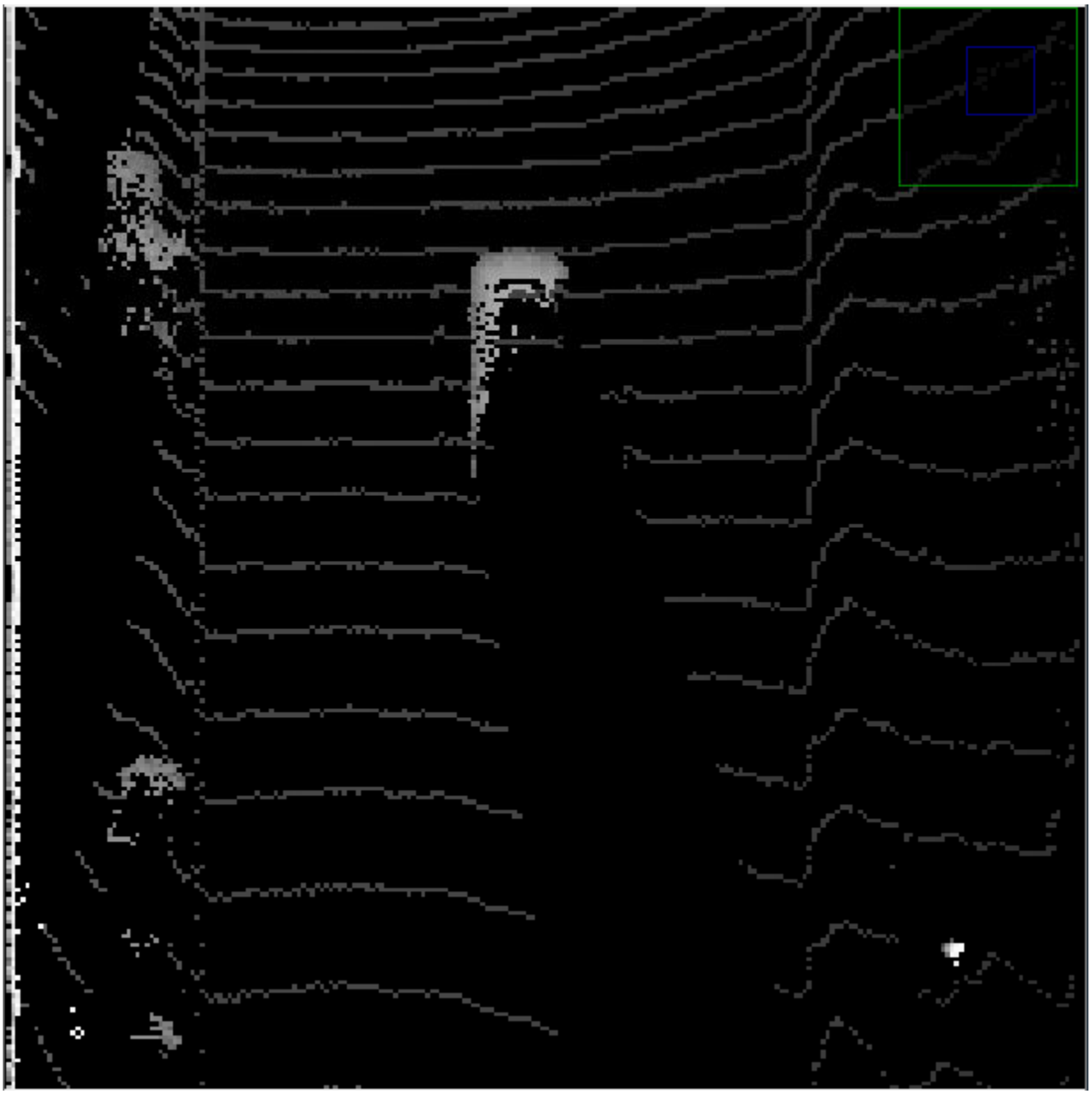
ID_S2_EX2:

Intensity Layer from BEV map

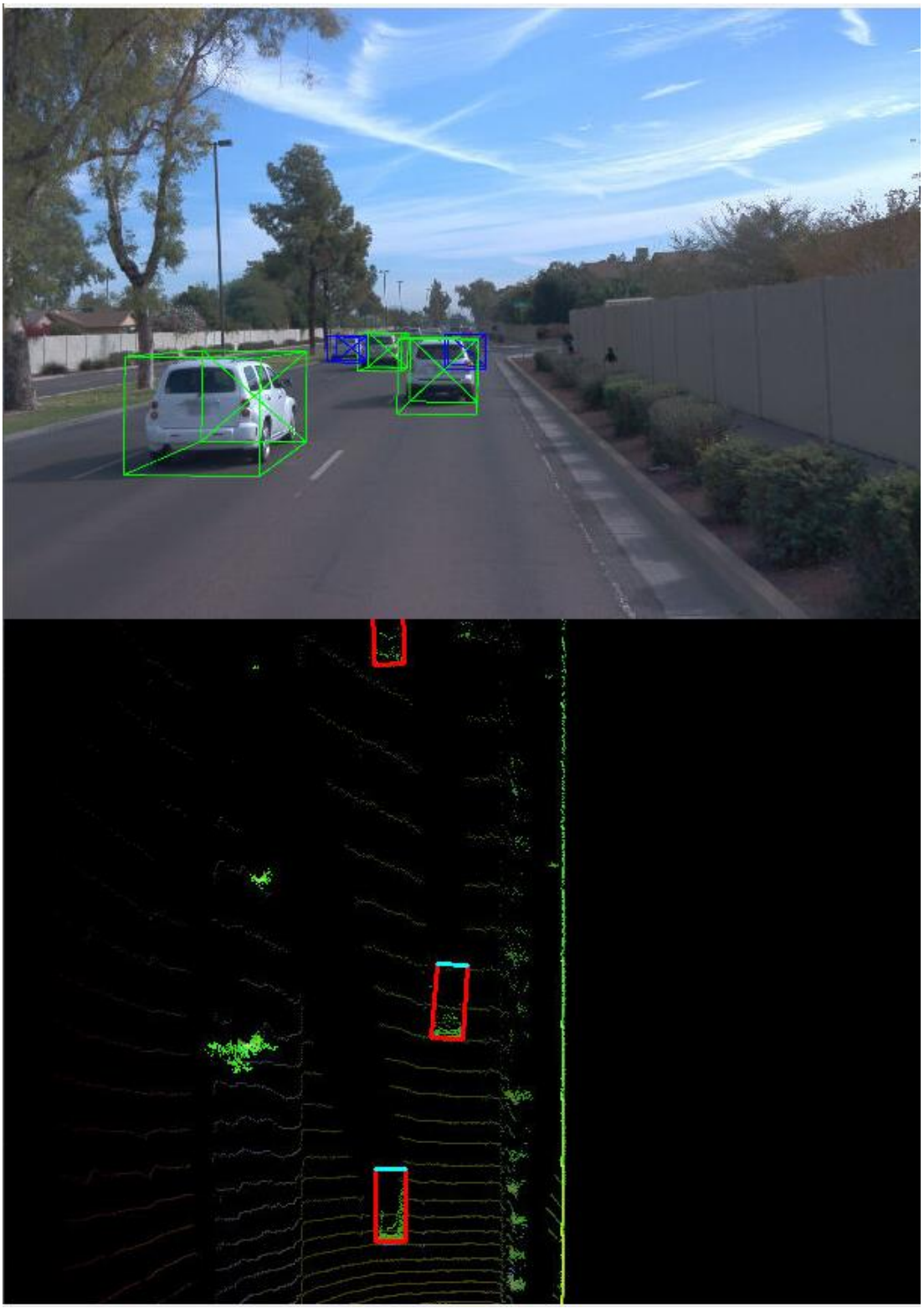


ID_S2_EX3:

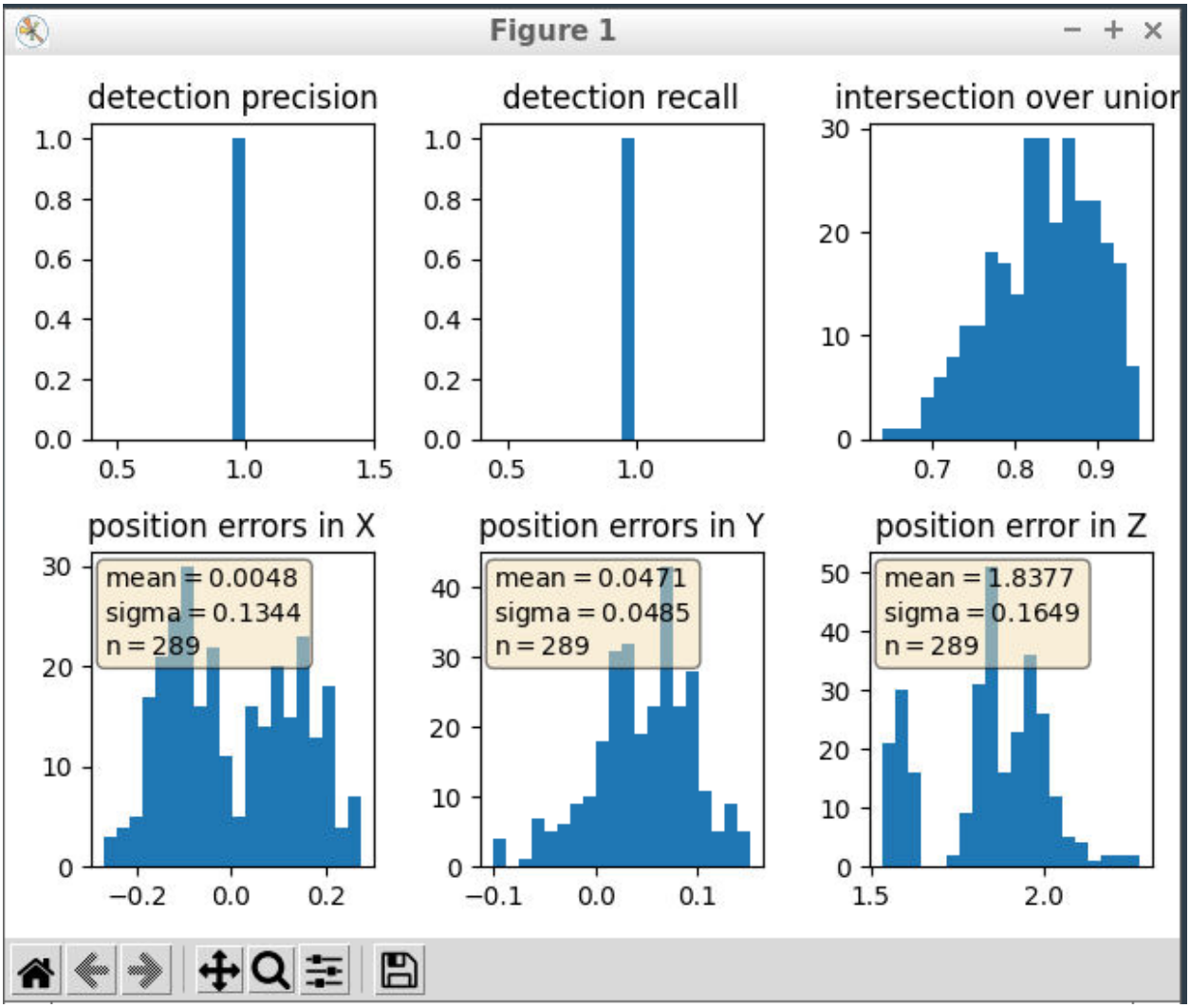
Height layer from BEV map



ID_S3_EX2:



ID_S4_EX3:




```
student task ID_S2_EX3
detecting objects in lidar pointcloud
student task ID_S3_EX2
validating object labels
measuring detection performance
student task ID_S4_EX1
student task ID_S4_EX1
student task ID_S4_EX1
student task ID_S4_EX2
reached end of selected frames
student task ID_S4_EX3
precision = 0.9506578947368421, recall = 0.9444444444444444
```

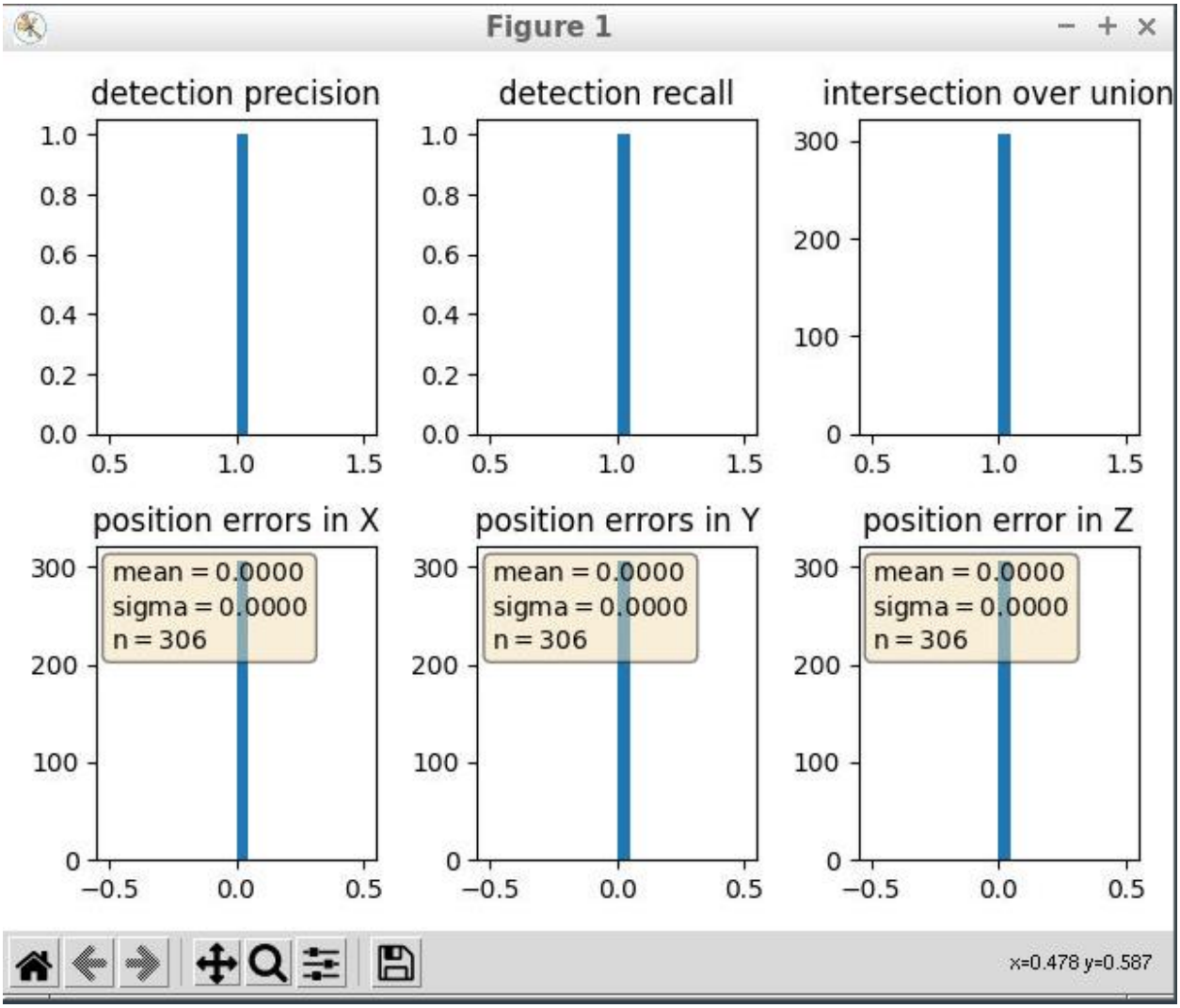


Figure 1
detection precision
detection recall
intersection over union
position errors in X
position errors in Y
position error in Z
mean = 0.0000
sigma = 0.0000
n = 306
x=0.478 y=0.587