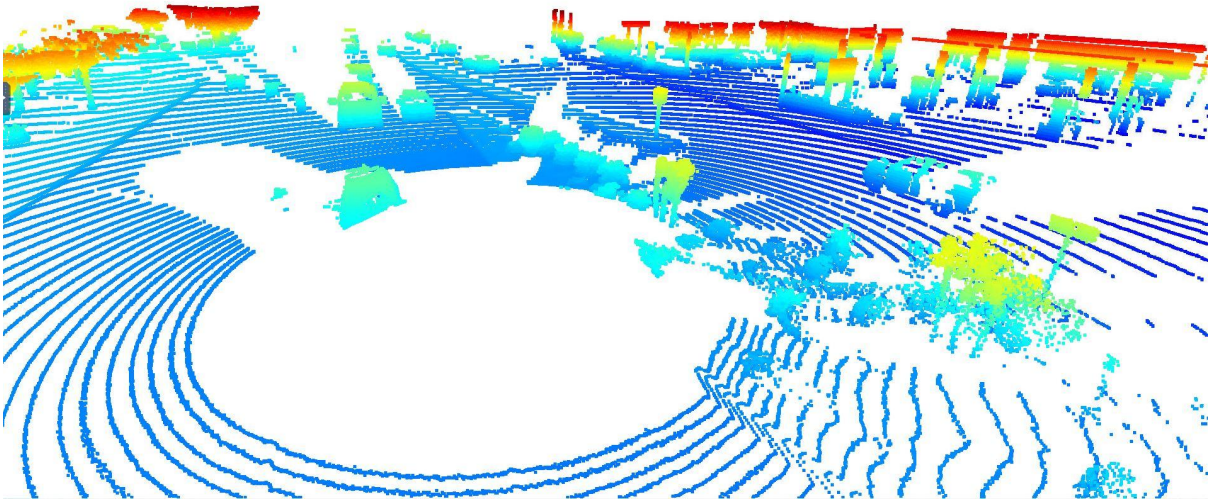
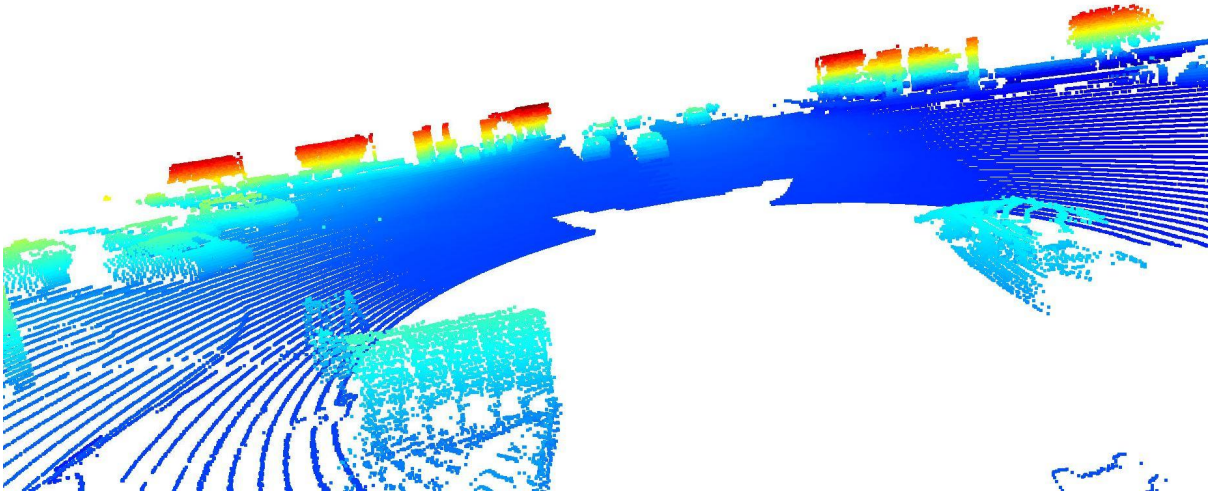
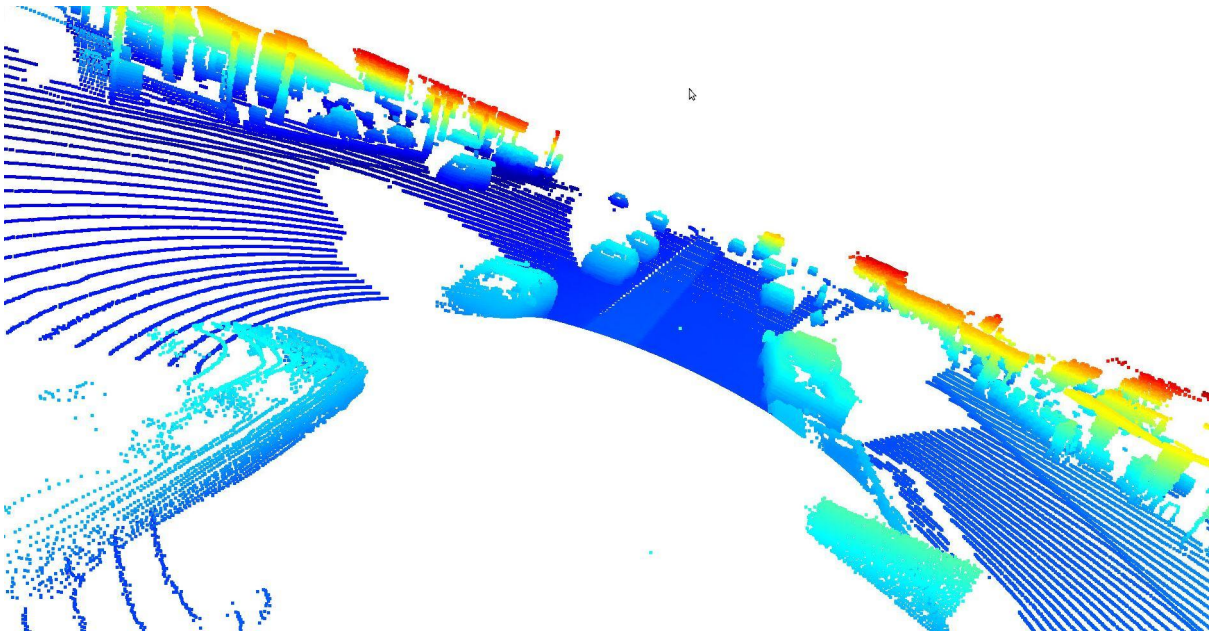
Midterm Project, 3D Object Detection, Report

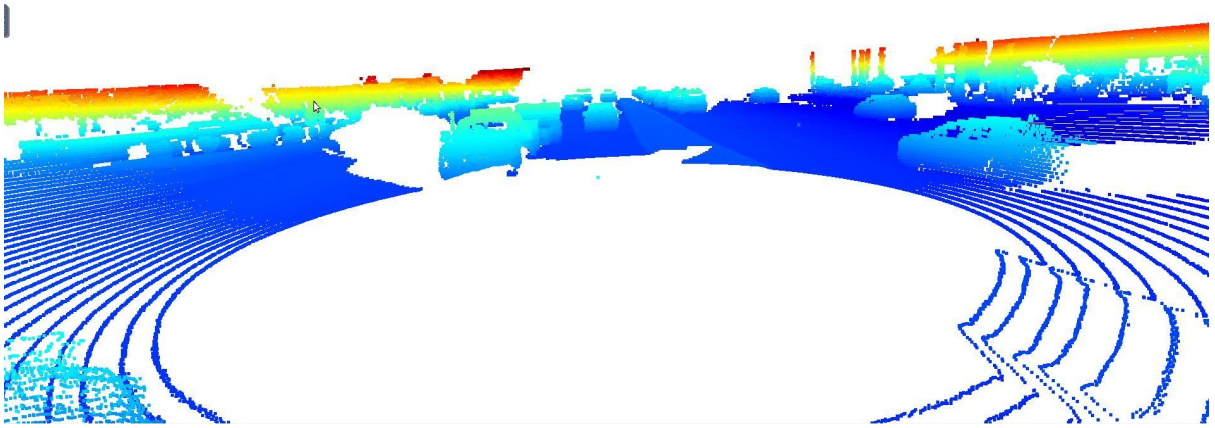
In order to complete the midterm project the following files has been modified:
1) objdet_pcl.py
2) objdet_detect.py
3) objdet_eval.py

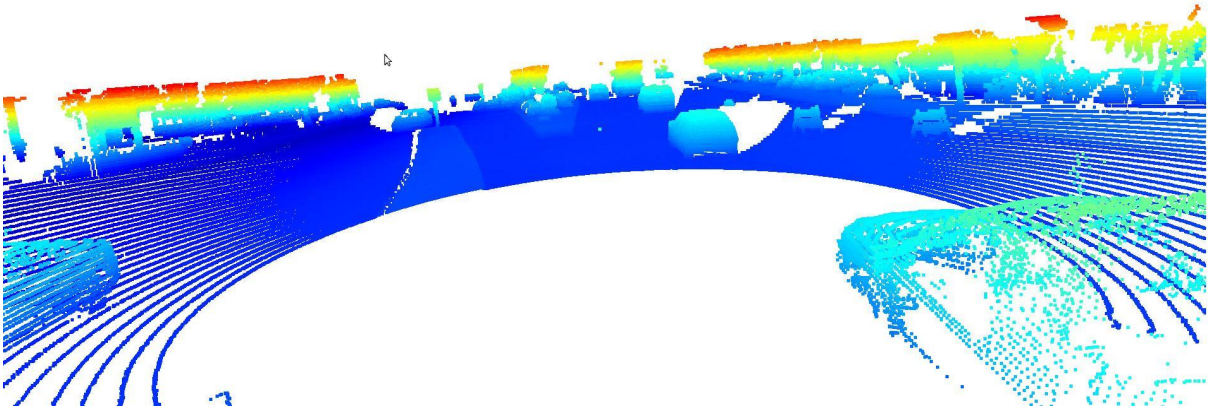
The code is used to visualize the point cloud and explore the environment. The result can be found in the following figures:

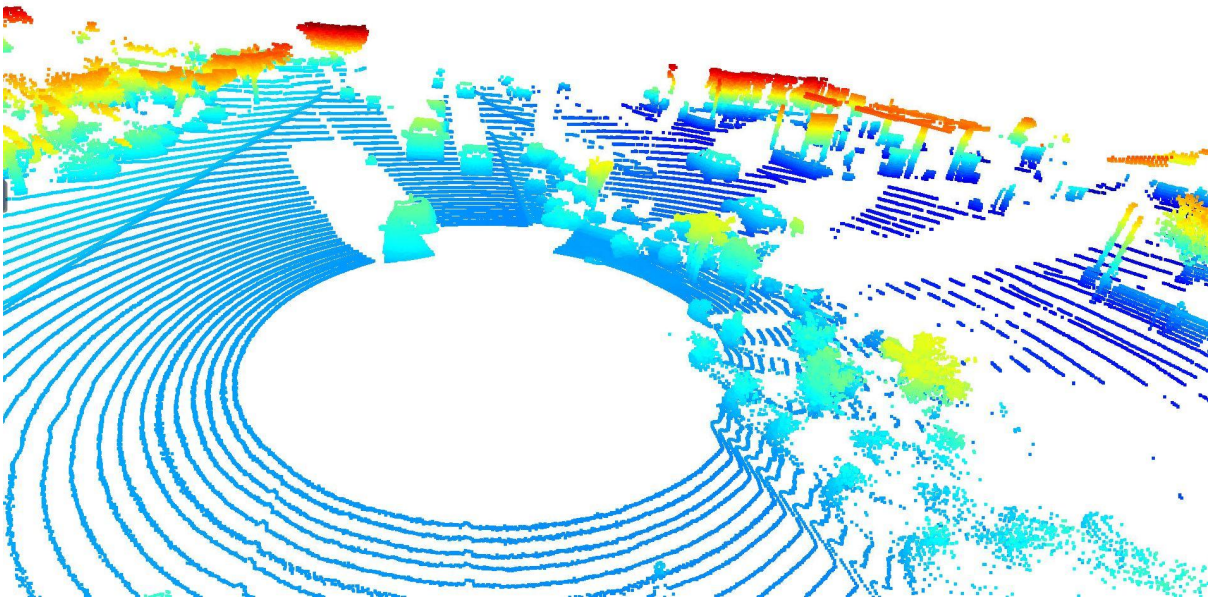


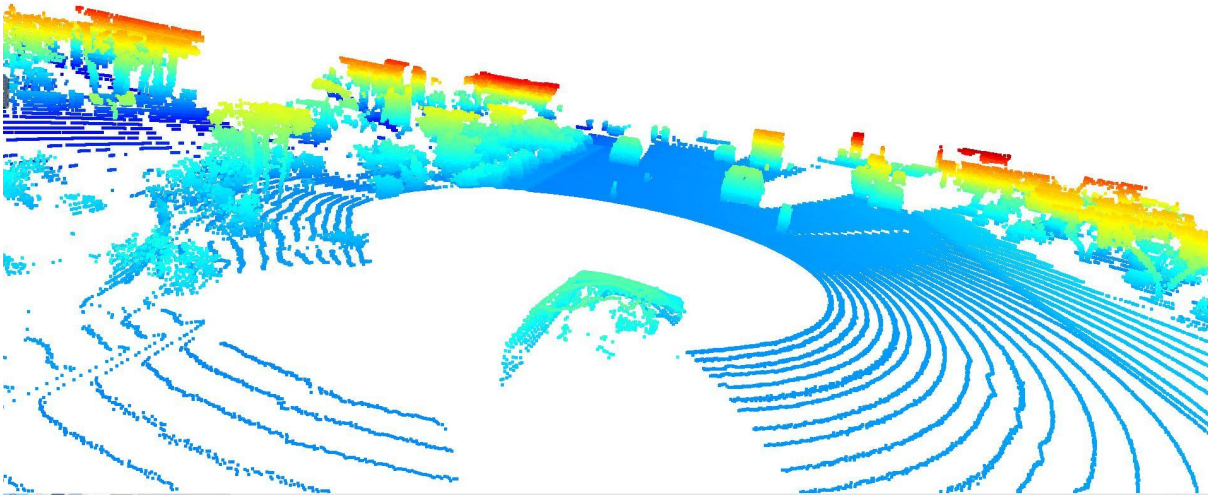


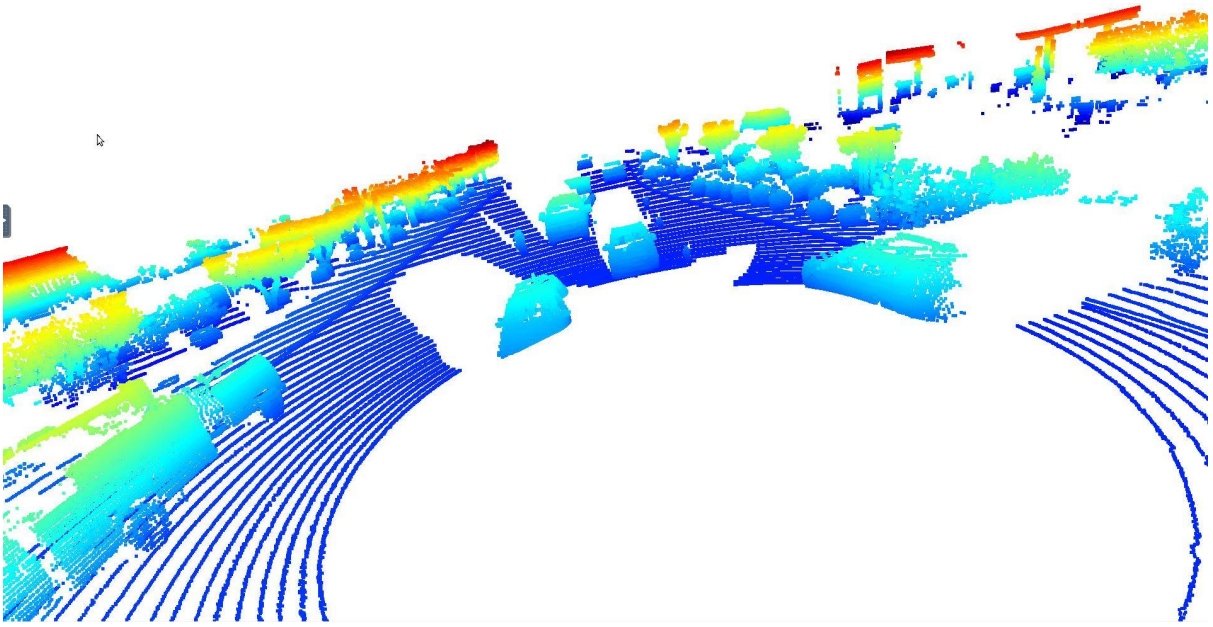


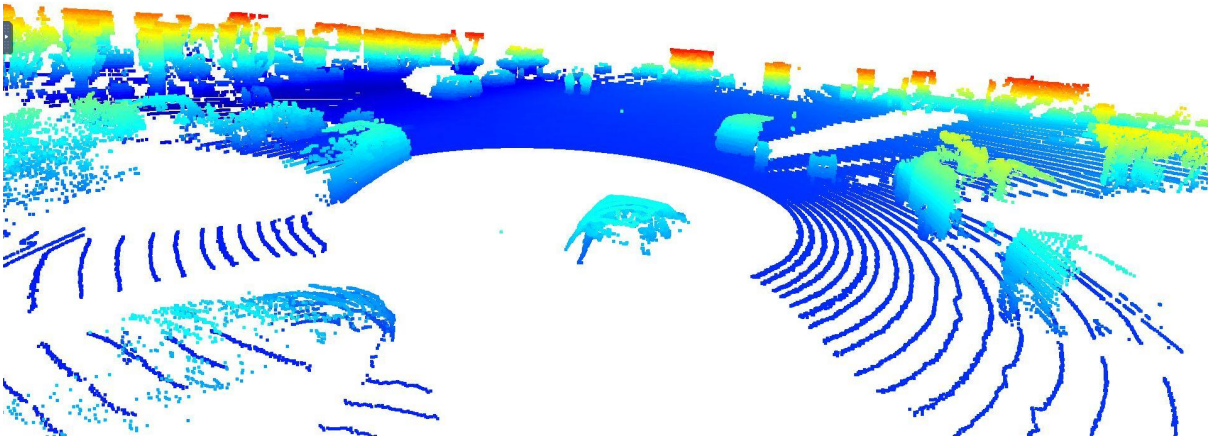


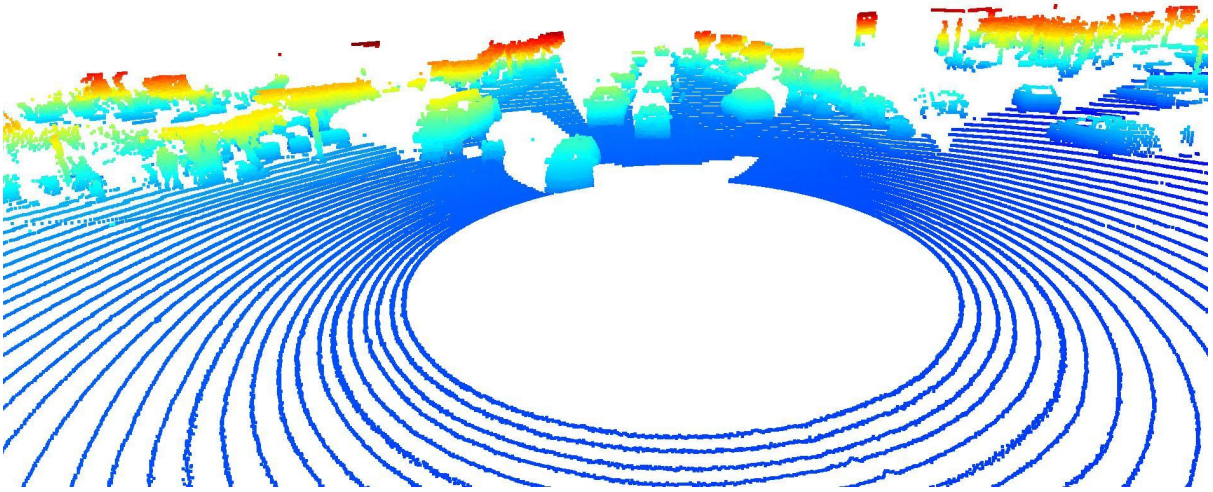




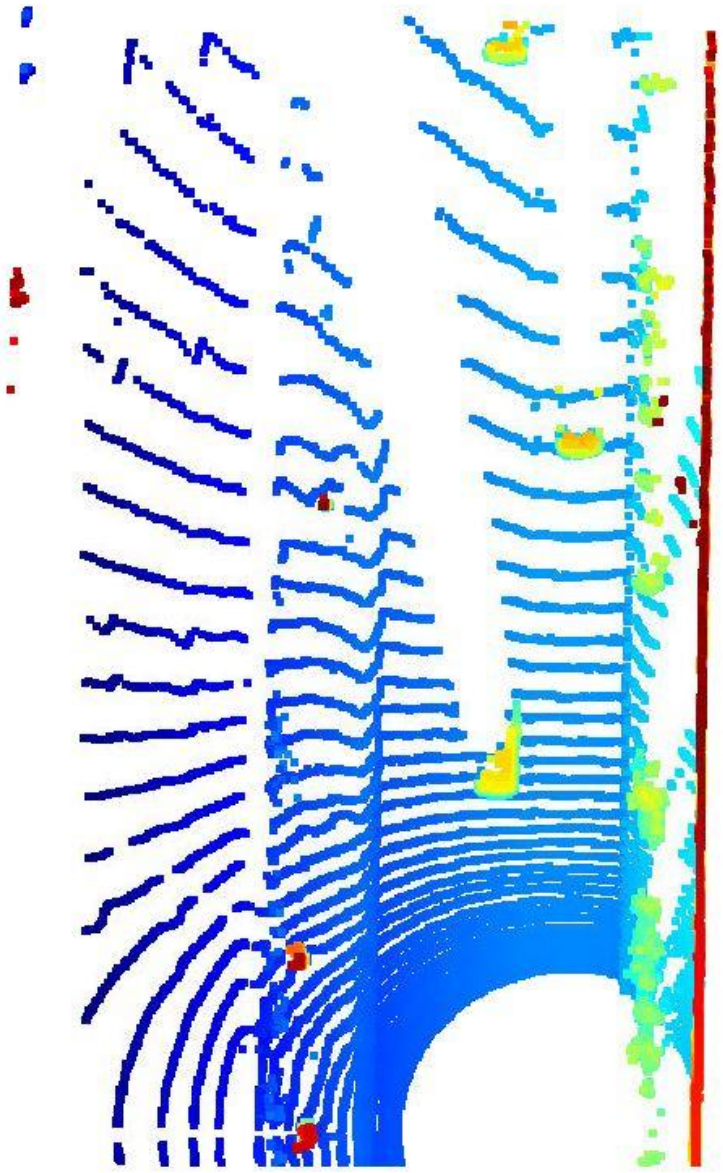


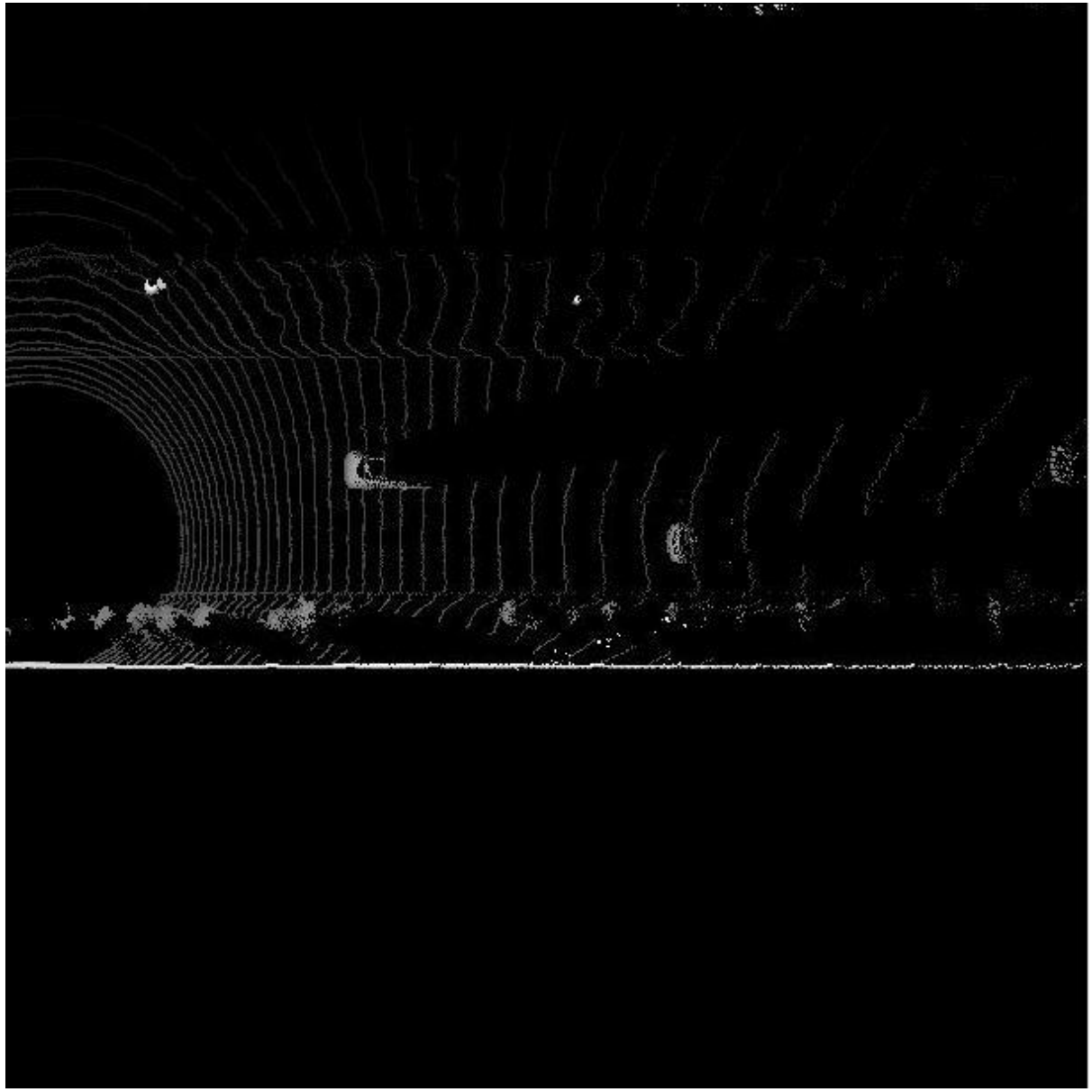




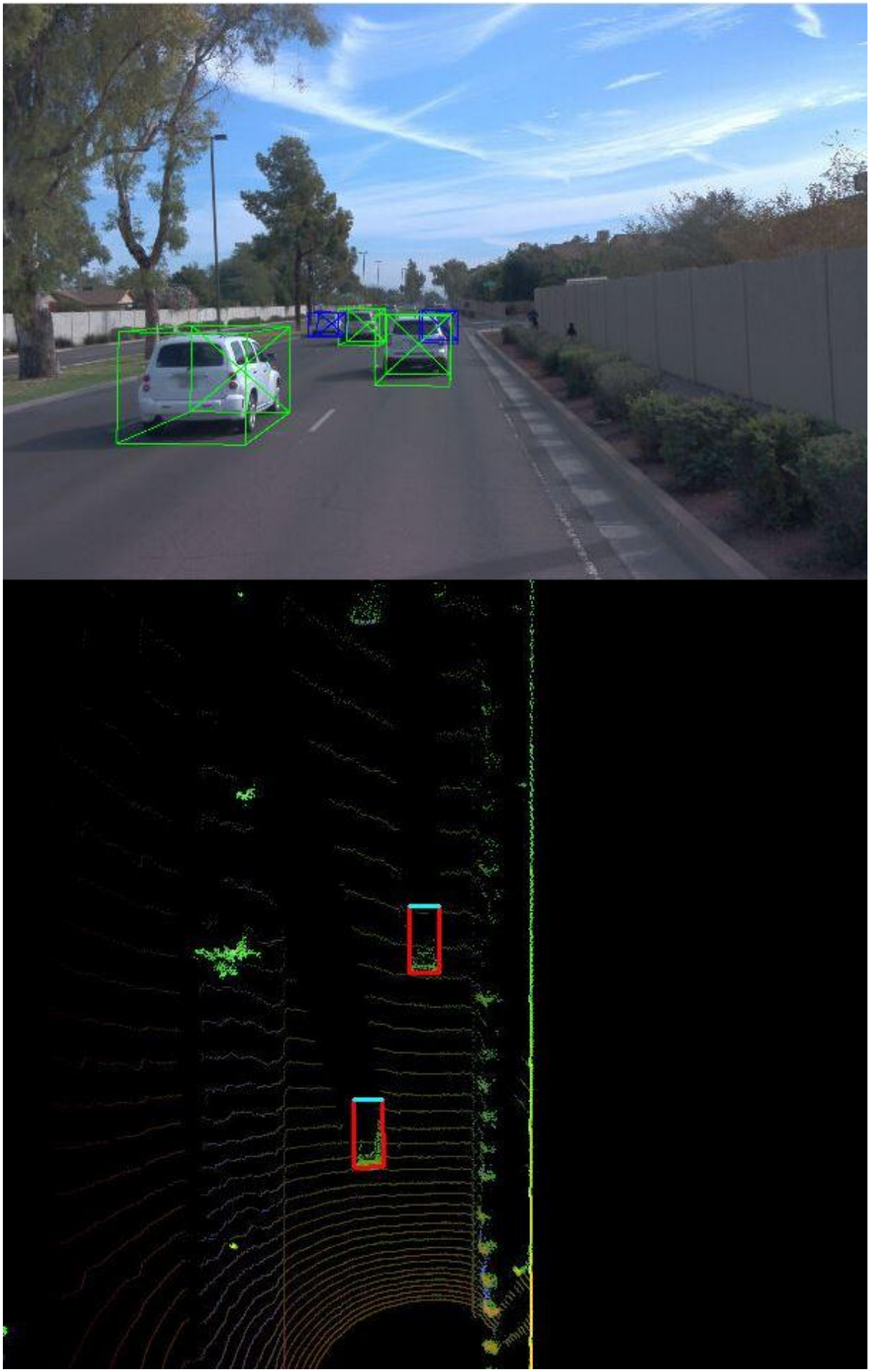


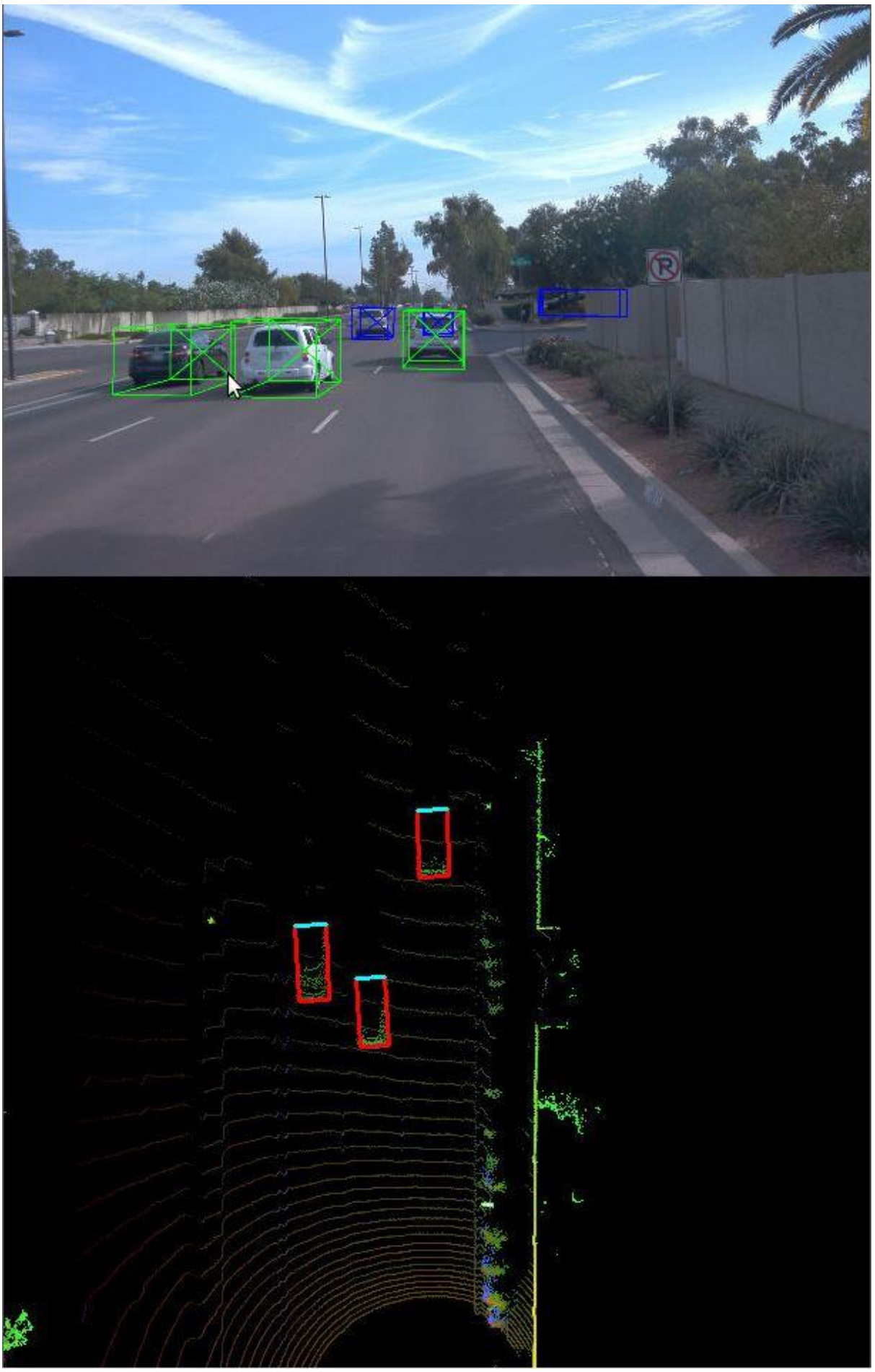
it is obvious that the different vehicles have different level of visibility and it depends to the enviromental features and conditions such as distance, any obsticle in front of the main vehicle, and etc.
The bird-eye-view of the point cloud, its intensity and height images have been created as following figures:

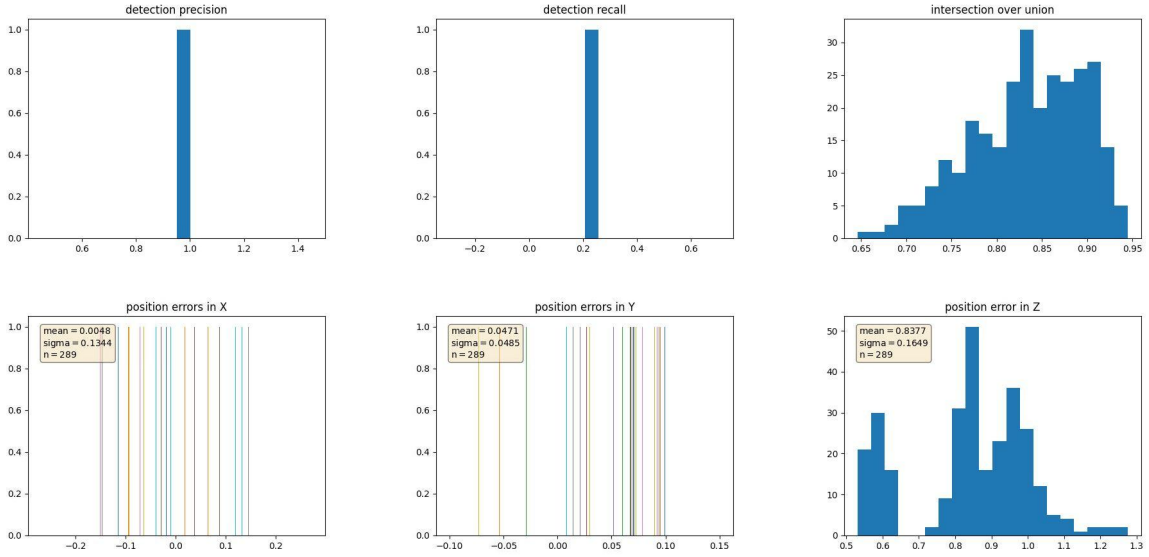




Based on the previous steps, the detected objects are shown in the following figures:





7000
HENKEL

It can be seen that the algorithm can detect objects, but still there is False Negative detection which can be found in second image.
To have a comprehensive analysis of the the detection algorithm the metrics are reported in the following figure: