[Final project 6] Object detection in Point Cloud: road boundary

Description

Object detection in Point Cloud is popular in HD Map and sensor-based autonomous driving. There basically four types of object you can obtain in daily scenario: road surface - contains painted lane marking and pavement area, support facility - contains road boundary (guardrail and curb), road sign, light pole, etc., uncorrelated object - for example, sidewalk, building, etc., and moving object - such like pedestrian, vehicle, bicycle, etc.

In this project, please search references, design and prototype your **road boundary** (guardrail) detection algorithm.

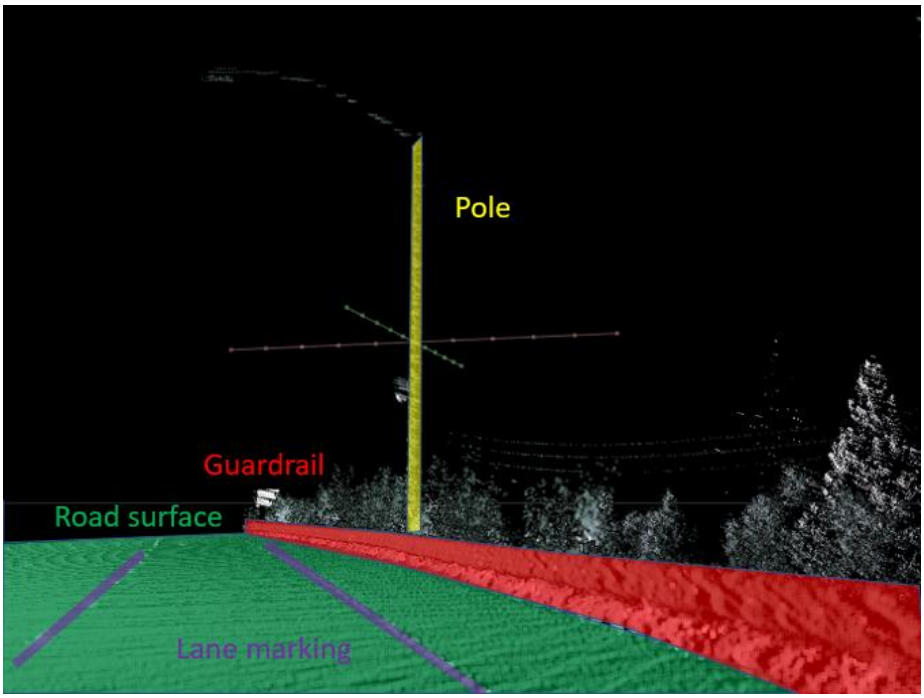

Figure 7. Point Cloud view and highlighted objects.

Project requirements

You should think about:

1. Representation of your object, for example, for lane marking <-> spline/line segment.
2. Methodology of automatically object detection.

Please submit your **source code** (+ **readme**) and report slides, contains introduction, methodology with figures (generated by you), experiment, conclusion, futures and references (if any).