3D semantic labelling of colored LiDAR point cloud using supervoxels based segmentation approach /color based region growing segmentation approach.

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Methodology

Steps:

1) We have assessed the 3D semantic labelling of three types of data
   a. LiDAR (only geometric information XYZ)
   b. LiDAR + intensity (XYZI)
   c. LiDAR + orthophoto (XYZRGB)
2) Supervoxels based segmentation/ color based region growing segmentation was used to segment the point cloud data resulting in 3D segments.
3) Spectral and geometrical features are extracted from the 3D segments created.
4) The features are classified using machine learning algorithms into 8 classes.
5) The feature labels were transferred to the points within the each segment.