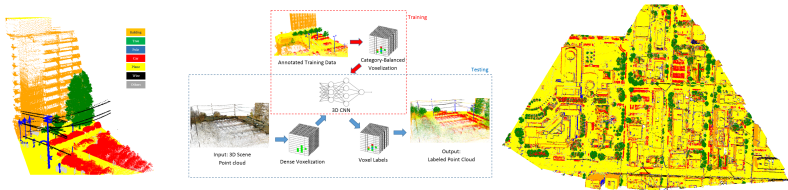


Point Cloud Labeling using 3D Convolutional Neural Network

J. Huang and S. You (ICPR 2016)



- ▶ Labelling 3D point clouds using a 3D CNN
- ▶ Motivation:
 - ▶ Projecting 3D to 2D: loss of important 3D structural information
 - ▶ No segmentation step or hand-crafted features
- ▶ An end-to-end segmentation method based on voxelized data
 - ▶ Voxelization to generate occupancy voxel grids centered at a set of keypoints
 - ▶ 3D CNN: two 3D convolutional layers, two 3D max-pooling layers, a fully connected layer and a logistic regression layer
- ▶ Experiments on a large Lidar point cloud dataset of the urban area of Ottawa with 7 categories