

3D OBJECT DETECTION FOR LIDAR AND INSTANCE SEMANTIC SEGMENTATION

Customer

US Tier-1 start-up

Business Need

AI-based Perception System

Solution

- Machine Learning approach for
 - 3D Object Detection for LiDAR
 - Instance Semantic segmentation for traffic Sign detection
 - Object distance/pose estimation

The Impact

- Highly accurate DMS
- Embedded implementation of DMS

The Problem

- Development and optimization of Deep Learning Algorithms for 3D Object Detection for iDAR data and Instance semantic segmentation for Traffic Signs
- Real-time highly accurate object detection algorithms for Automotive perception systems

The Solution

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Data generation & augmentation

Feature	Accuracy
LiDAR based 3D object detection with features like <ul style="list-style-type: none"> distance estimation, object orientation estimation & velocity estimation for autonomous vehicles 	80~85 %
LiDAR based object tracking & motion forecasting	80~85 %
Automated data generation & augmentation for traffic signs	80~85 %
Instance Semantic segmentation	70~75 %