Automated roadside asset Extraction and Monitoring using LiDAR database and Deep Machine Learning algorithms

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Current Projects
Data Collection Specifications

- 2x Riegl LiDAR sensors
- Automated 3D Pavemetrics Laser Crack Measurement Sensors
- Panoramic and ROW Camera
- Laser Inertial Profiler
- Navigation Sensors (GNSS, IMU)
Machine learning components
Training Data
5+ years of 360° LiDAR database
10+ years of Video database
~ 1.1 Billion training images
783 sign Categories
Automatic Traffic Sign Detection

- Location
- Category
- Number of posts
- Dimensions
- Reflectivity
- Facing direction
Recommendation system
Traffic signs and Guardrails

Detection Speed = 1 km/s
Roadside Barrier Assessment
Covered Roadside Barriers in LiDAR
Pavement Marking Detection

Detection Speed = 540 km/h
Complete picture
One more thing ...
Other applications
Thank you!

Question?
Waterfront - Vancouver