



INFORMATION ON THE COMPLETED PROJECT CONTRIBUTION AGREEMENT

Comparing Forest Data Through Time Using Laser Imaging, Detection, and Ranging (LiDAR) Technology

The inability to accurately compare laser imaging, detection, and ranging (LiDAR) data collected over different years hinders our understanding of forest growth and dynamics, leading to potential mismanagement of forest resources and undermining sustainable forestry practices in the face of climate change.

PROJECT TITLE

Unbiased Comparison of Successively
Acquired Laser Imaging, Detection, and
Ranging (LiDAR) Point Clouds

ORGANIZATION

University of Laval
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START DATE

December 1st, 2023

END DATE

March 31st, 2024

This project aims to improve the accuracy of measuring forest growth by comparing LiDAR data collected from the same location over different years. To ensure accurate comparisons, adjustments are necessary to account for differences between the images taken at various times. Currently, there are no integrated solutions for these corrections in LiDAR data analysis tools. The project's goals include reducing biases in the data and incorporating analytical solutions into the LiDAR technology for R package, which will allow for more precise assessments of forest characteristics based on data collected at different times and locations.

Having LiDAR datasets from the same location over time opens new opportunities to develop indicators that show how forest structures change, which can help improve forest management strategies and promote sustainability. This project supports the integration of multiple LiDAR datasets for forest inventories and enhances the idea of automatic fault indication using satellite imagery over time. By gaining a clearer understanding of how forests grow and respond to disturbances, the Canadian forestry sector can make better decisions in managing forests effectively.