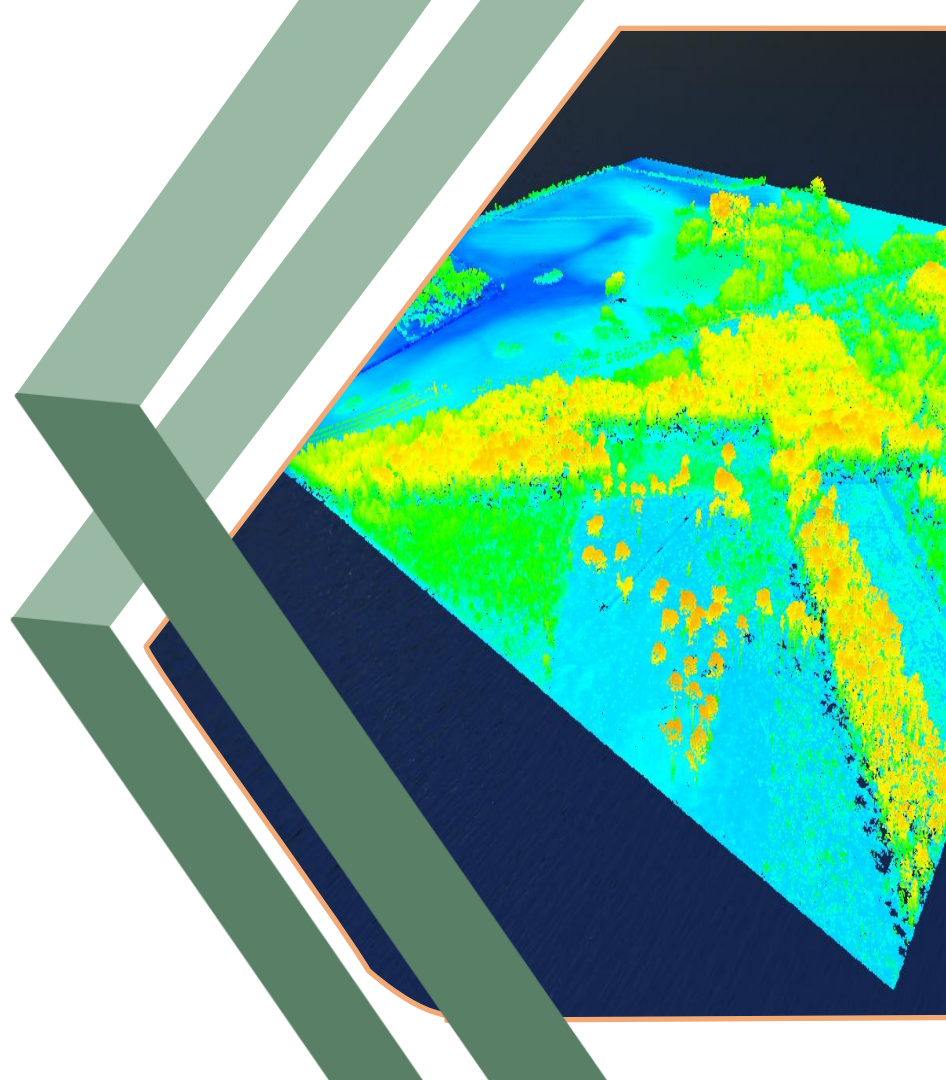




Automation in forest operations

Janis Ivanovs, LSFRI Silava

Biorural conference
12.03.2024



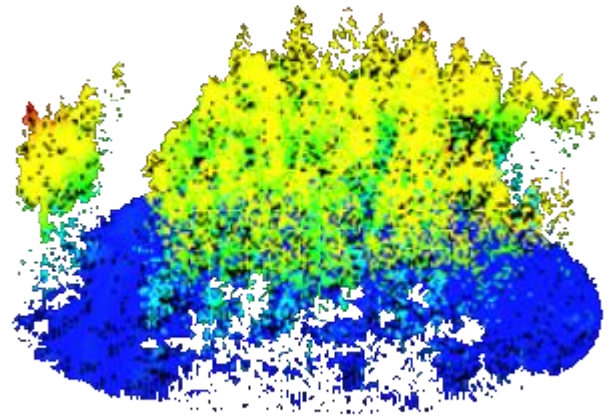
Introduction

Today, we will explore the advancements in forestry management through the lens of automation;

Our focus will be on how automation is reshaping traditional forest operations, leading to increased efficiency, sustainability, and conservation efforts.

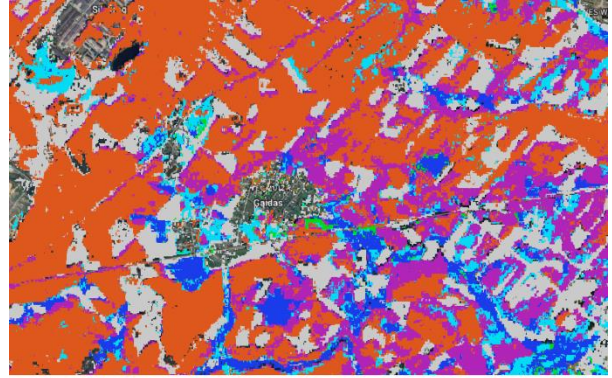
Remote Sensing in Forestry

Predictive analytics and machine learning algorithms can be applied to the data collected from remote sensing and GNSS technologies to predict many different forest inventory variables



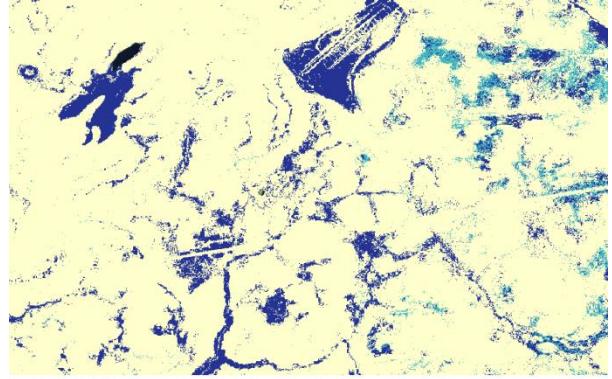
Remote Sensing in Forestry

Remote sensing technologies, such as satellite imagery and aerial surveys, provide invaluable data for assessing forest conditions.



Remote Sensing in Forestry

Wet area maps and classified forest tree species maps derived from remote sensing data offer detailed insights into forest ecosystems.



Automatic rut measurements

Rut detection using GNSS enables precise identification of vehicle paths, aiding in minimizing environmental impact and optimizing operational efficiency.



Automatic rut measurements



Benefits of Automation

Enhanced Efficiency: Automation streamlines processes, reducing manual labor and time required for tasks like tree species classification and rut detection.

Sustainability: By utilizing remote sensing and GNSS data, automation promotes sustainable forestry practices by minimizing environmental impact and optimizing resource management.

Conservation Efforts: Automation facilitates accurate monitoring of forest conditions, leading to improved conservation efforts and biodiversity preservation.

Conclusions

Automation is revolutionizing forestry management by harnessing the power of remote sensing and GNSS technologies.

Through automation, we can achieve greater efficiency, sustainability, and conservation in forest operations.



Thank you! Questions?



+371 25254403



www.silava.lv



janis.ivanovs@silava.lv



Rigas street 111, Salaspils