

## **A comparison of Gradient Nearest Neighbor and Most Similar Neighbor imputation methods to map forest cover types of Western Oregon**

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### **Abstract**

Various imputation methods are used to generate forest biomass estimates in the United States. The Gradient Nearest Neighbor (GNN) and Most Similar Neighbor (MSN) are two such imputation methods that combine satellite imagery, ground data, and environmental data to generate biomass estimates at a regional scale. However, there is little confidence on how accurate these estimates are at a local scale. This case study will estimate the amount of agreement between the GNN and MSN imputation methods in a forested landscape. Light Detection and Ranging (LiDAR) data will be used to increase the confidence of these imputation methods to estimate forest biomass at the local scale, in forests of Western Oregon.