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| **Reliable Scalable Above Ground Carbon Estimates - Tracking Forests Globally** |
| **Introduction/Aim:**  Forests play a critical role in absorbing vast quantities of carbon dioxide, but high-fidelity estimates of the carbon they store are costly and impractical at scale. PlanetLabs Forest Carbon data is designed to solve these challenges.  **Methods:**  PlanetLabs built a global dataset of aboveground forest carbon, tree height, and canopy cover estimates to make it easy to analyze every hectare of forest and woodland, anywhere on Earth. This is done using cutting edge machine learning models that fuse a rich archive of historical satellite observations with high quality, laser-derived reference data. Ideal for carbon project accounting, digital MRV, reforestation, and deforestation monitoring, Forest Carbon delivers estimates precise enough to monitor the complete spectrum of forest change, from million-acre wildfires to small agricultural clearcuts to single large tree selective harvests.  **Results:**  This has resulted in annual time steps in Planet Labs 10-year archive and, in the future, ongoing quarterly updates to track these dynamic ecosystems. Drawing on cutting-edge deep learning models and validated with high quality air- and spaceborne laser reference data, this captures more complete patterns of forest change over time with archive 30m data and, in the future, quarterly 3m Planet Monitoring data.  **Conclusion:**  This has been able to model Forest Carbon on a global scale. This means it’s straightforward to understand changes to the forests and woodlands you care about, no matter where they are. Track forests and forest carbon stocks across entire regions and within specific localities, all the way down to discrete parcels of land and even individual trees. Global coverage and tree-scale data removes the burden of needing to travel to remote locations and conduct field measurements or airborne surveys. |