

LGBoosting Algorithm in Machine Learning

- ✓ LGBoster stands for **Local Gradient Boosting**.
- ✓ It's a variant of Gradient Boosting that emphasizes **local updates** in the feature space.
- ✓ Helps improve prediction by minimizing **global errors** and **enhancing local accuracy**.
- ✓ Used in structured data problems like classification and regression.

Advantages of LGBBooster Algorithm

- More accurate predictions in **heterogeneous data**.
- Reduces **global bias** by honing in on local patterns.
- Scalable and better suited for **real-time syst**

Uses Of LGBBoost Algorithm

- Large datasets: LGBBoost is highly efficient and performs well with large datasets.
- Need for speed: If training time is a critical factor, LGBBoost's faster training speed can be a significant advantage.
- Good accuracy: It generally delivers accuracy comparable to other boosting algorithms like XGBoost

Objectives of LGBost Regression

- It uses a leaf-wise strategy, which allows it to process the data faster than traditional level-based methods.
- A leaf structure that minimizes the negative gradient of loss function is highly preferred

Diagrammatic Representation Of LGBoost



From: **Boosting algorithms for projecting streamflow in the Lower Godavari Basin for different climate change scenarios**

Water Sci Technol. 2024;89(3):613-634. doi:10.2166/wst.2024.011

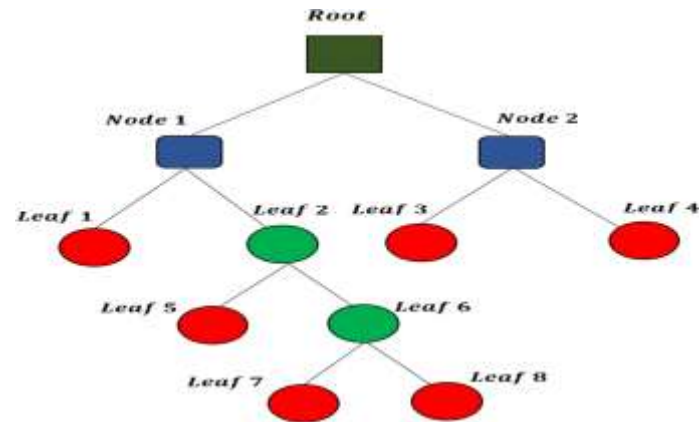


Figure Legend:

Tree formation in LGBoost.