



Boosting Algorithm in Regression

Agenda

- What is Boosting ?
- Adaptive Boosting
- XG Boosting
- LG Boosting

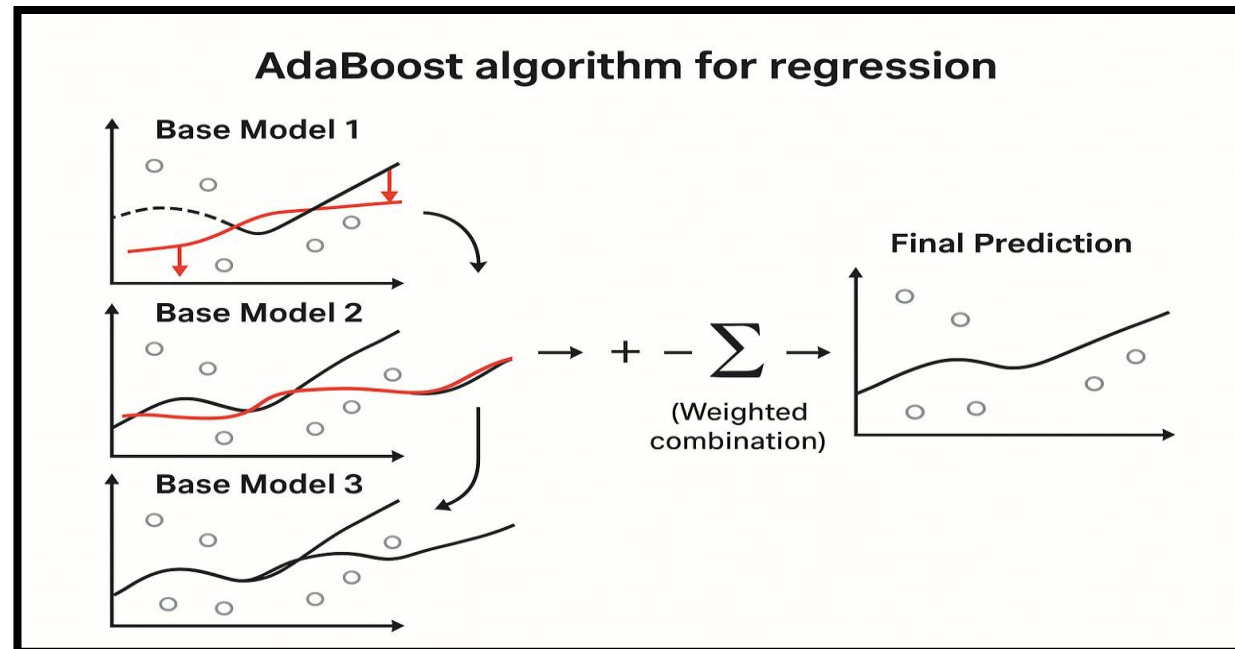


What is Boosting ?

- Boosting is a way to **combine many small models** to make one strong model that gives better predictions.
- Basically, It builds **multiple weak models** (usually decision trees with limited depth).
- Each new model focuses on **correcting the errors** made by the previous ones.
- The final prediction is a **weighted combination** of all these models.

Adaptive Boosting

- It's a method that builds a strong prediction model by combining many **simple models** (like small decision trees). Each new model **focuses on fixing the mistakes** made by the previous ones.



Extreme Gradient Boosting

- **XGBoost (eXtreme Gradient Boosting)** is a supercharged version of gradient boosting—a machine learning technique that builds a strong model by combining many weak models (usually decision trees).
- It's especially popular for predicting numbers (regression) and categories (classification), and it's known for being **fast, accurate, and efficient**.

Light Gradient Boosting

- LightGBM is a super-fast machine learning tool made by Microsoft. It helps computers make smart predictions by learning from data, especially when the dataset is huge.
- It builds simple models (called “**weak learners**”) one by one.
- Each new model **fixes the mistakes of the previous one**.
- Together, they form a strong model that makes **better predictions**.



Thank you

Brita Tamm

502-555-0152

brita@firstupconsultants.com

www.firstupconsultants.com