

BOOSTING

ALGORITHM
IN
REGRESSION

AGENDA

D/b Bosting Algorithms and Other Tree Algorithms

Ada Boosting Regressor

XG Boosting Regressor

LG Boosting Regressor

Final tips & takeaways



D/B BOOSTING ALGORITHMS AND OTHER TREE ALGORITHMS

Other Tree Algorithms

Full sized tree

Good learners

No Weight priority

Different Individual
Trees

Boosting Algorithms

Stump

Weak Learners

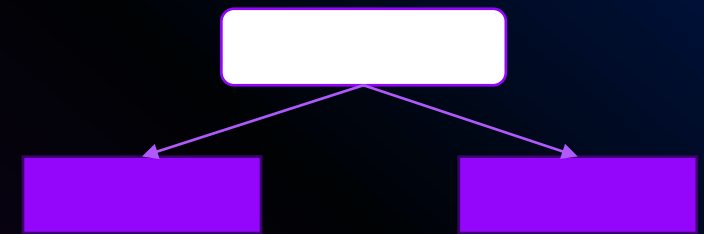
Weight priority

Transfer the error
to the next stump

ADA BOOSTING REGRESSOR ALGORITHM

ADAM BOOSTING ALGORITHM IN ML

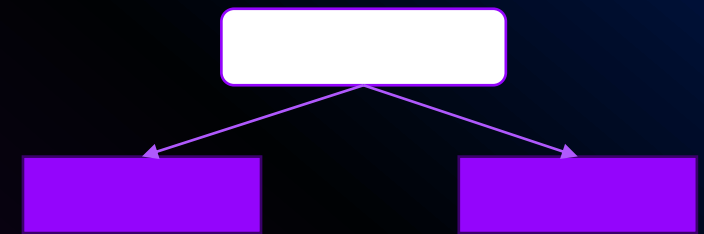
- Adaptive Boosting Algorithm
 - Its widely used for Decision Trees
- It also used for Random forest Algorithm
 - It combines a multiple weak learners to create a strong learner
- They use weighted average and vote for prediction



XG BOOSTING REGRESSOR ALGORITHM

XG BOOSTING ALGORITHM IN ML

- Extreme Gradient Boosting
- It can handle missing values in efficient manner
- It supports the parallel processing
- It can be used to train models on a large dataset
- They are customizable and allows fine tuning for optimized performance



The background features a gradient from deep purple on the left to bright blue on the right. Overlaid on this are several concentric circles and arcs of varying thicknesses and colors (white, light blue, and dark blue). Some arcs are incomplete, creating a sense of motion or a stylized orbital path. Small white dots are scattered throughout the composition.

D/B ADA BOOST AND XG BOOST

Ada boost

re-weighting

Sequential weak
learners

No Weight priority

flexible

XG boost

gradient descent

trees as weak
learners

Weight priority

accurate

THANK YOU

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