Summary

XG, LG boost

LG boost

XG boost

Ada boost

Intro

Boosting

Algorithm

Summary

XG, LG boost

LG boost

XG boost

Ada boost

1

ADA BOOST

2

XG BOOST

3

LG BOOST

Intro

01

ADA BOOST

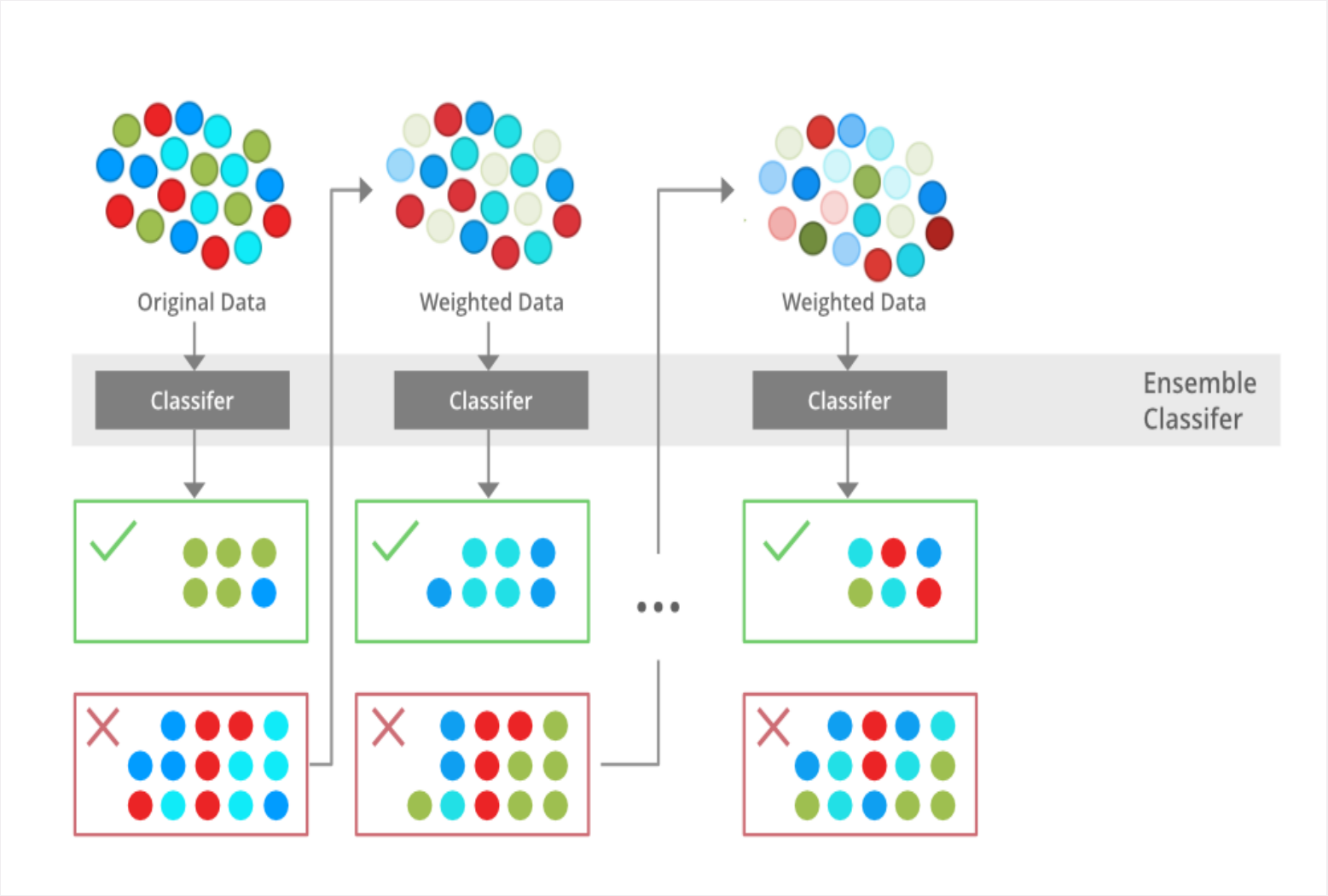
ADA BOOST

Summary

XG, LG boost

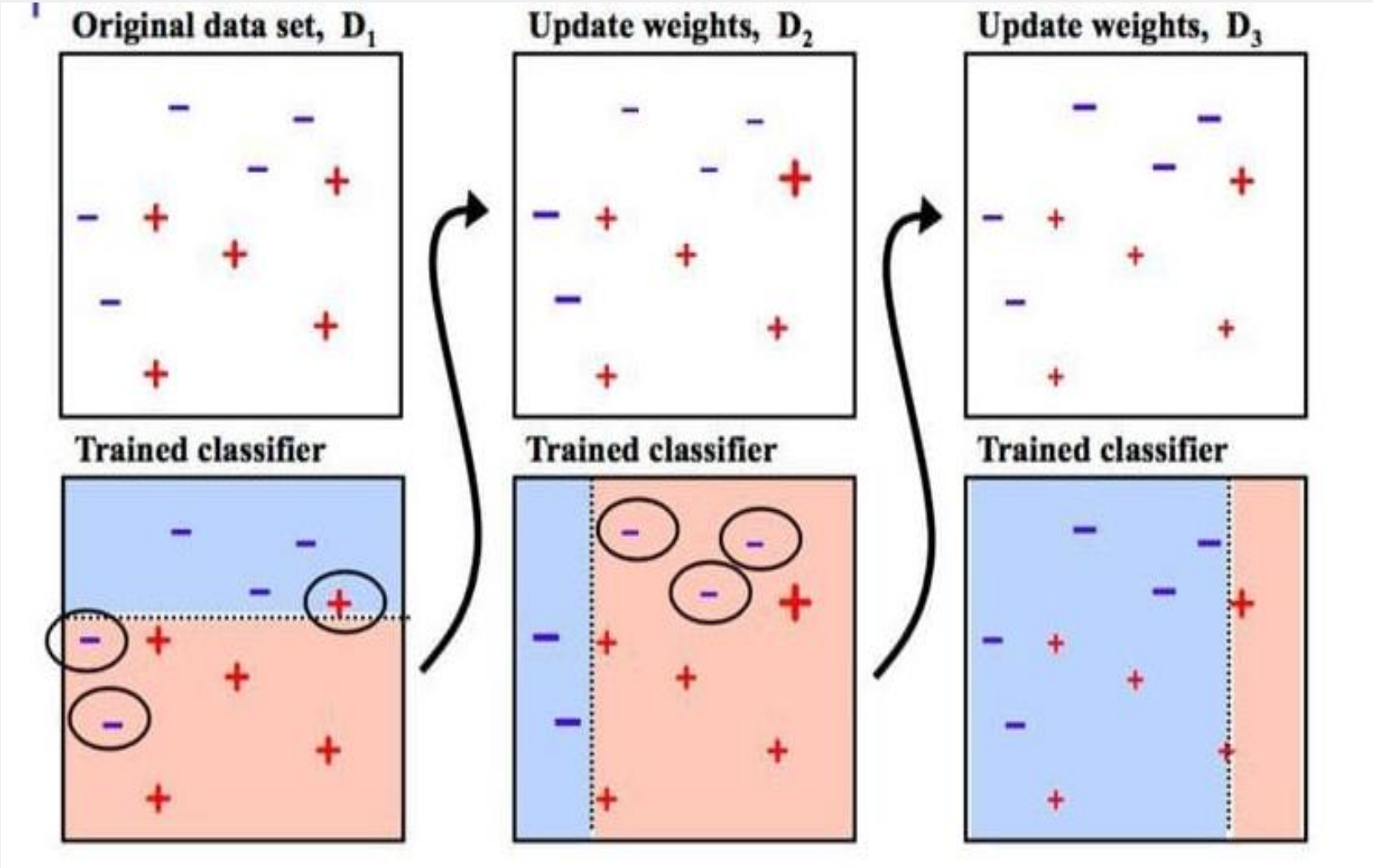
LG boost

XG boost



Ada boost

Intro


Original data set, D_1
Update weights, D_2
Update weights, D_3
Trained classifier
Trained classifier
Trained classifier

02

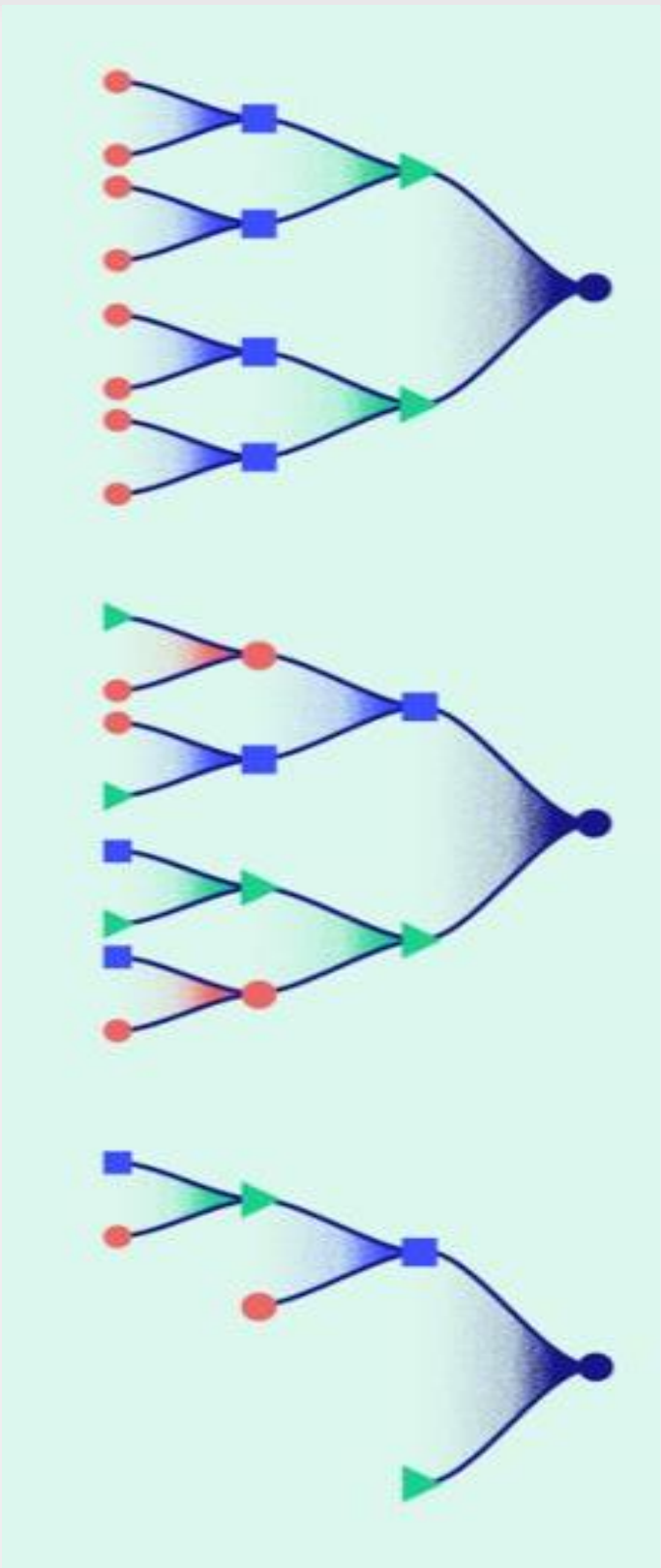
XG BOOST

XG BOOST

Summary

XG, LG boost

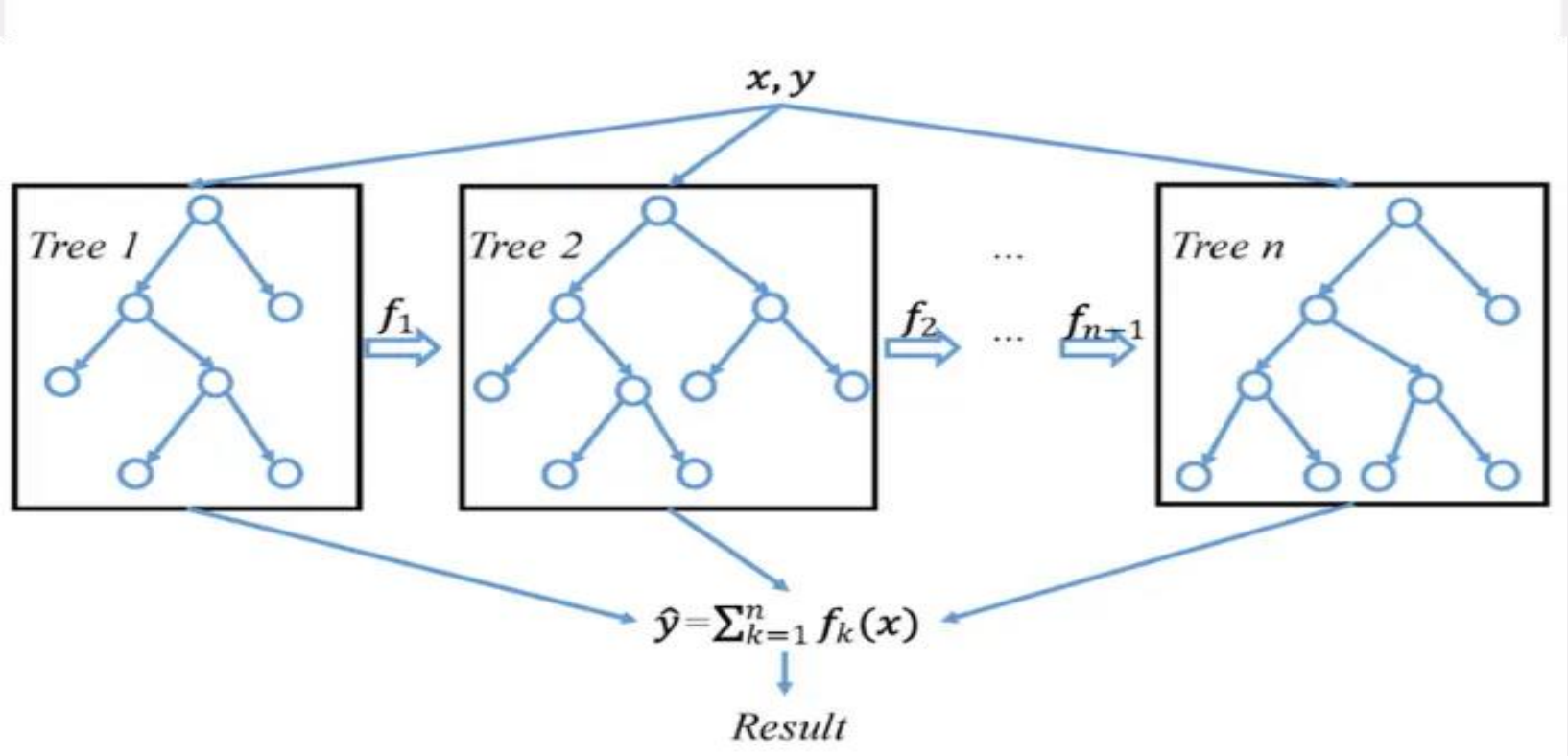
LG boost



XG boost

Ada boost

Intro


x, y
Tree 1
Tree 2
Tree n
f1
f2
...
...
fn−1
ŷ = Σ_{k=1}^{n} fk(x)
Result

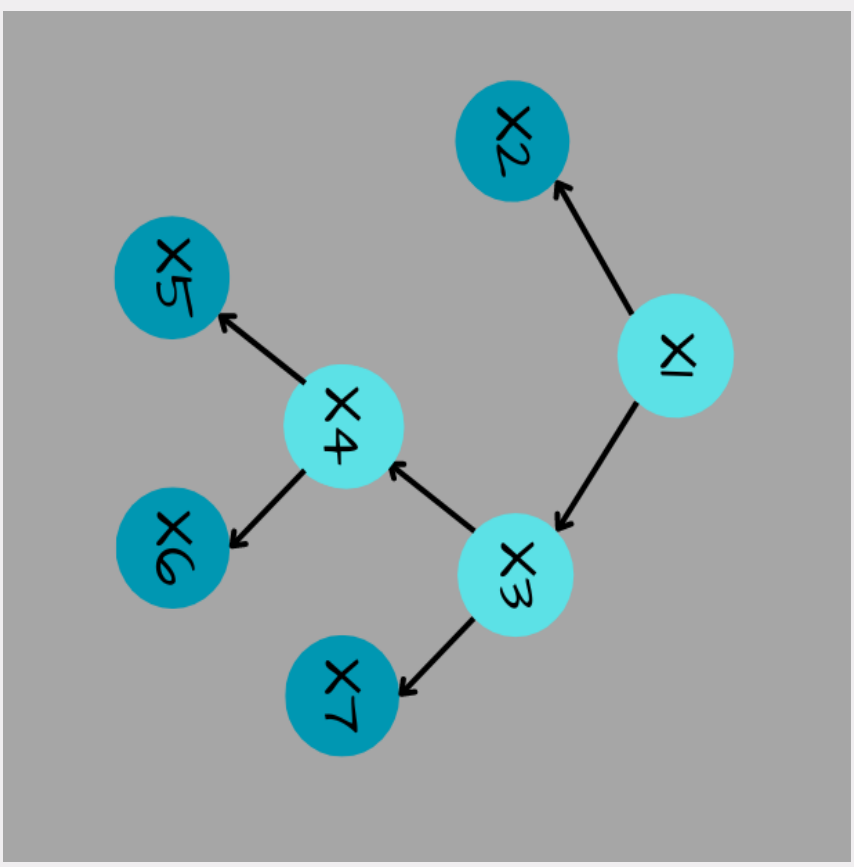
03

LG BOOST

LG BOOST

Summary

XG, LG boost

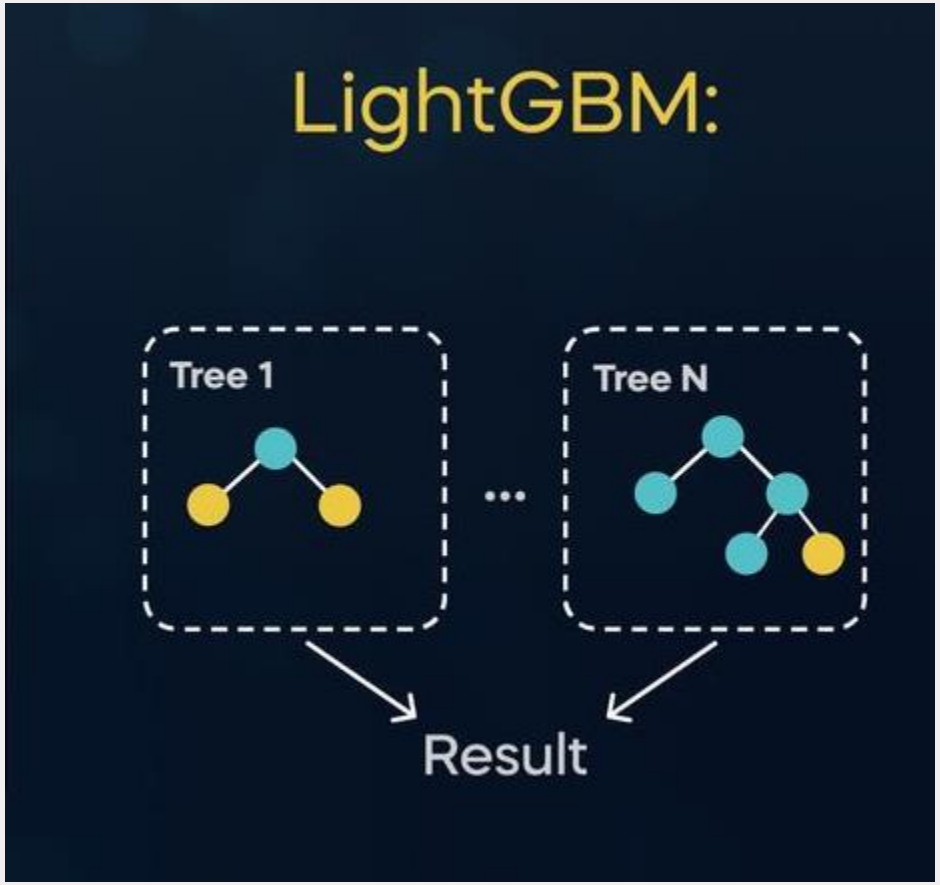


LG boost

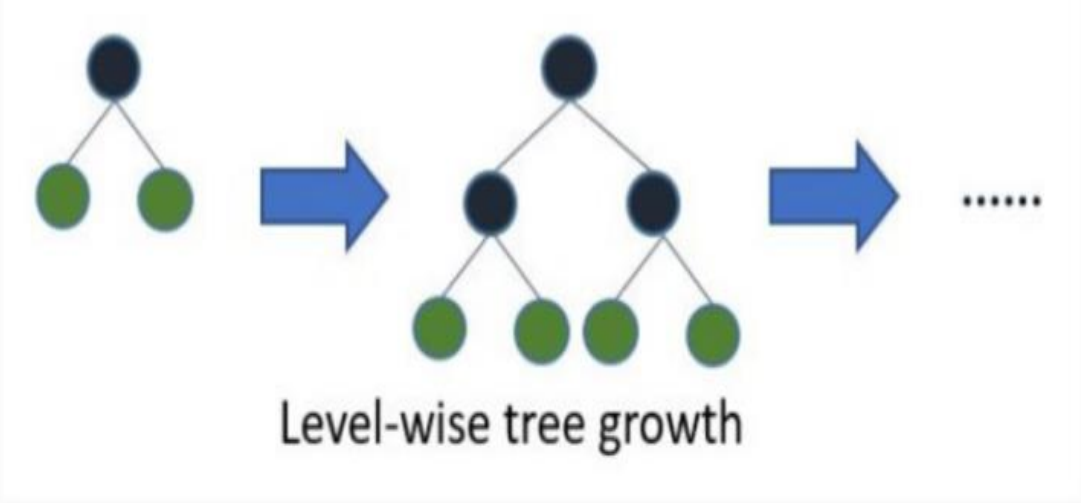
XG boost

Ada boost

Intro

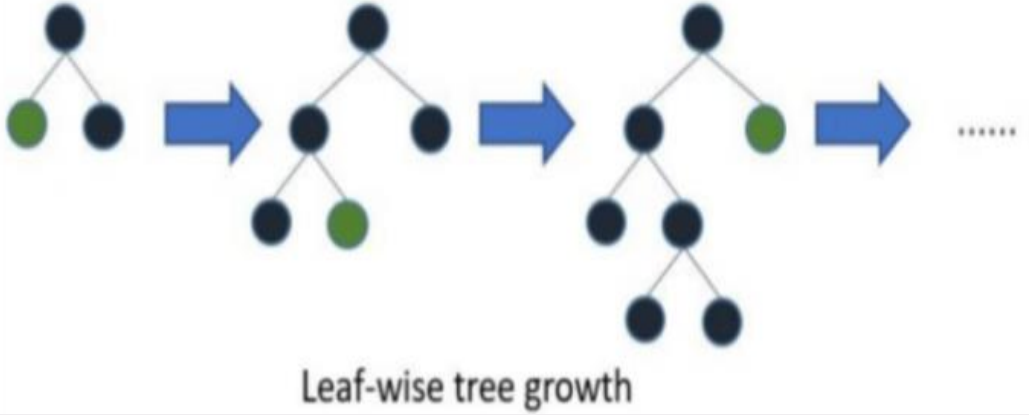

LightGBM:
Tree 1
Tree N
Result

XGBoost:



Level-wise tree growth

LightGBM:



Leaf-wise tree growth

ADA BOOST

A technique that improves a weak model step-by-step to make it strong.

XG BOOST

A smart method that grows many strong trees to give the best prediction

LG BOOST

A fast algorithm that grows decision trees to make quick and accurate prediction