

A close-up, high-angle shot of a dark, rectangular microchip with the letters 'AI' glowing in bright blue on its top surface. The chip is mounted on a complex circuit board with numerous glowing orange and red traces and small components. The background is dark and out of focus, emphasizing the chip and its connections.

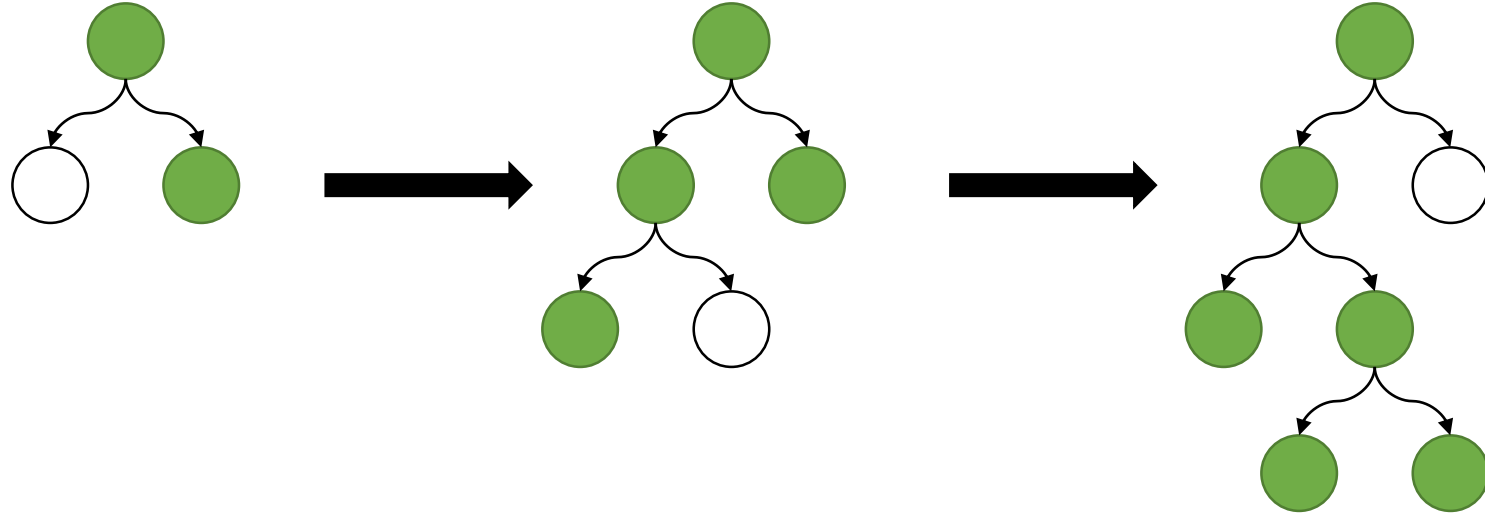
AI

MACHINE LEARNING

LG BOOST ALGORITHM

What is LG Boost Algorithm?

- LGBost (Light Gradient Boosting) developed by Microsoft
- Effectively handles structured and unstructured datasets
- Incorporates histogram based approach
- Groups data into bins, reduces calculations to create decision tree



It calculates “Gradients of Loss” with predicted values, finds the best split with reduced loss function

How Does LGBost Work?

- **Initial Prediction:** makes initial predictions using simple decision tree
- **Splitting:** Splits nodes using gradient based approach
- **Calculate Errors:** calculates loss function to find next best split
- **Iterate:** process repeats by improving errors of previous tree
- **Regularization:** techniques to prevent over fitting
- **Final Model:** predicting accurate output

Advantages of LGBBoost

- Handle huge dataset
- Fast processing and training
- Handles missing values
- Built-in hyper parameter tuning

Disadvantage of LGBost Algorithm

- Limited important feature selection
- Over fitting due to handling missing data
- Excessive memory consumption