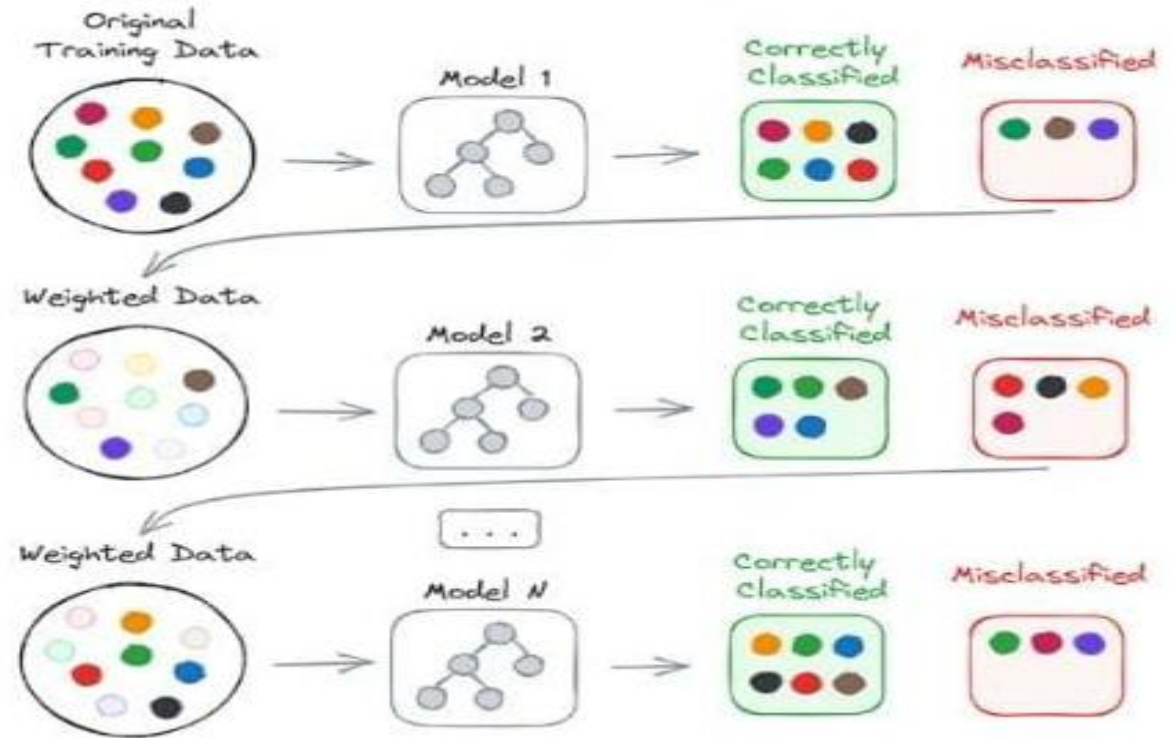


MACHINE LEARNING-REGRESSION ALGORITHMS

Boosting Algorithms

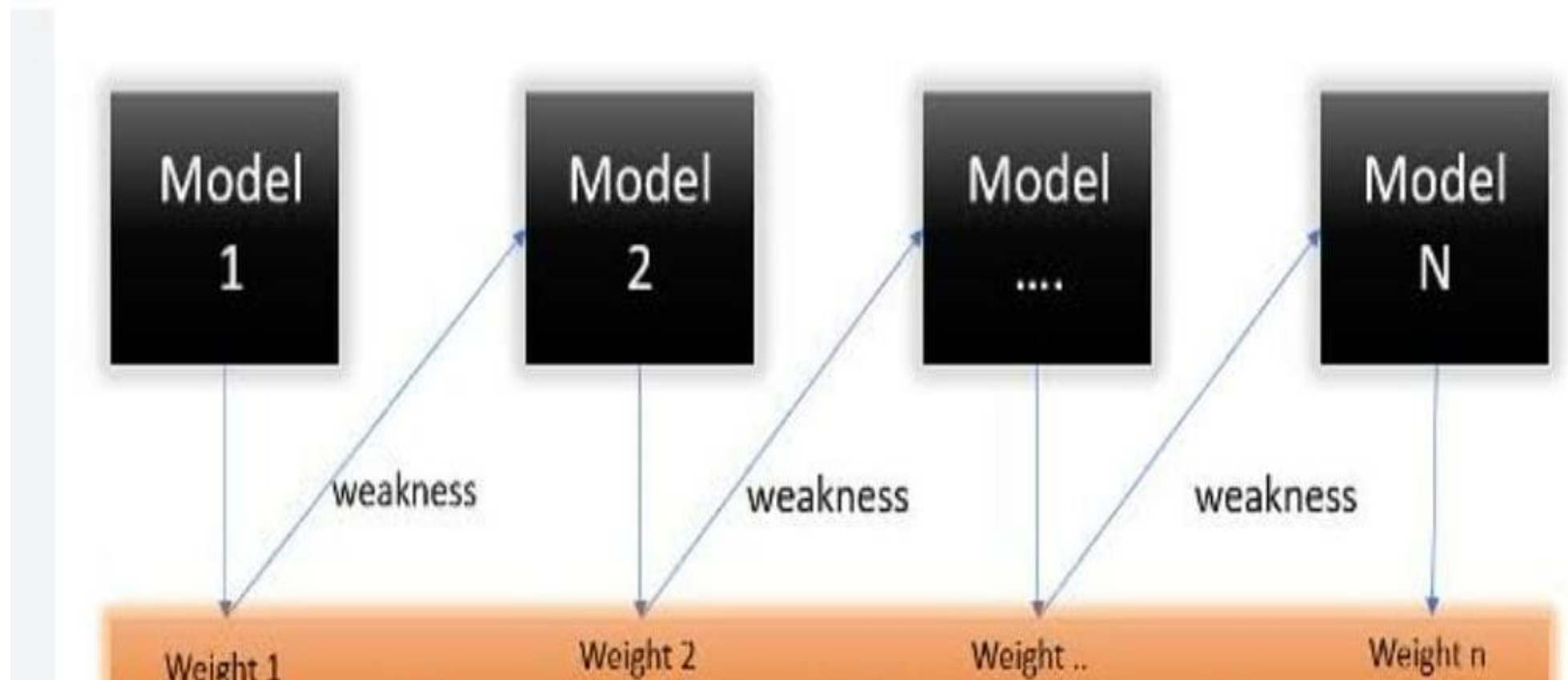
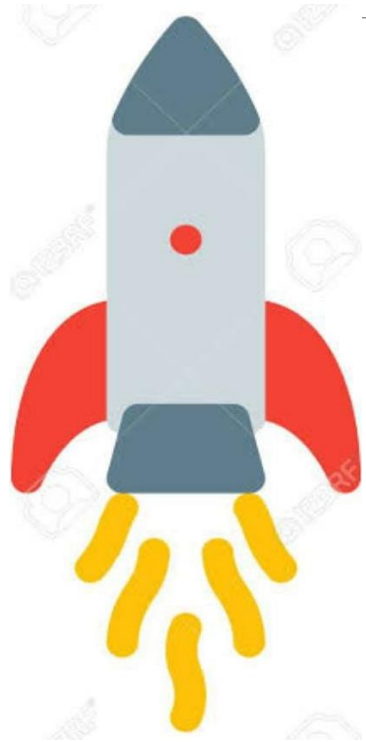
Types of Boosting

- AdaBoost
- XG Boosting
- LG Boosting



Machine Learning-Regression Algorithms

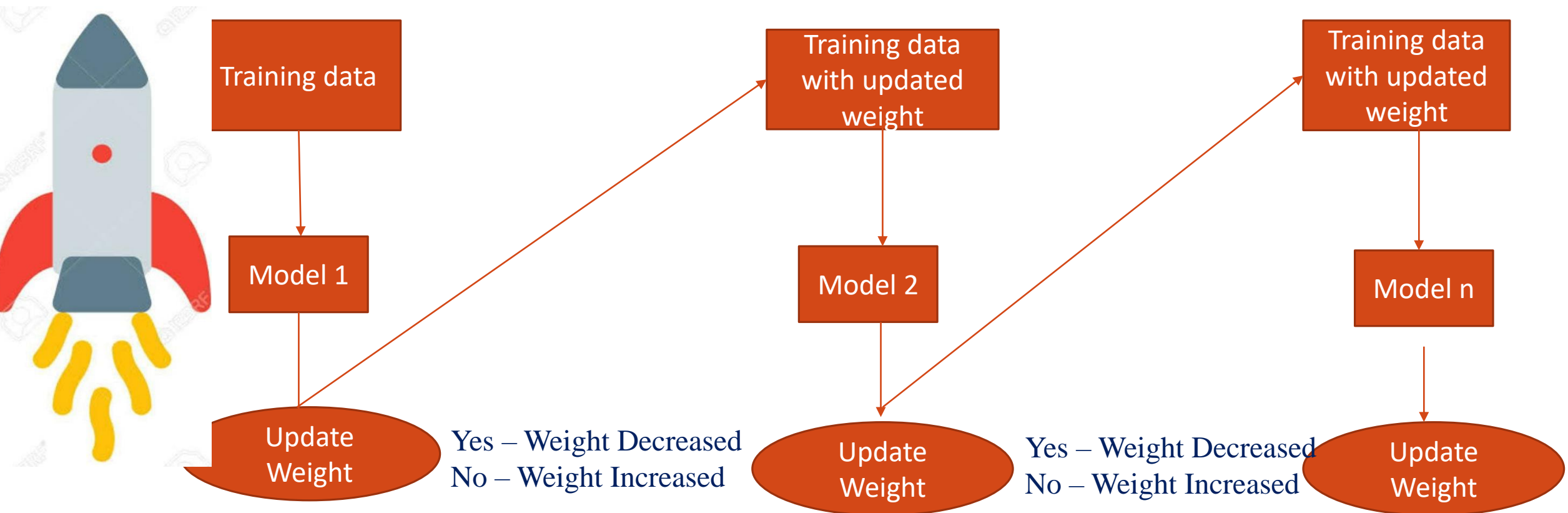
ADABOOST



Machine Learning-Regression Algorithms

AdaBoost

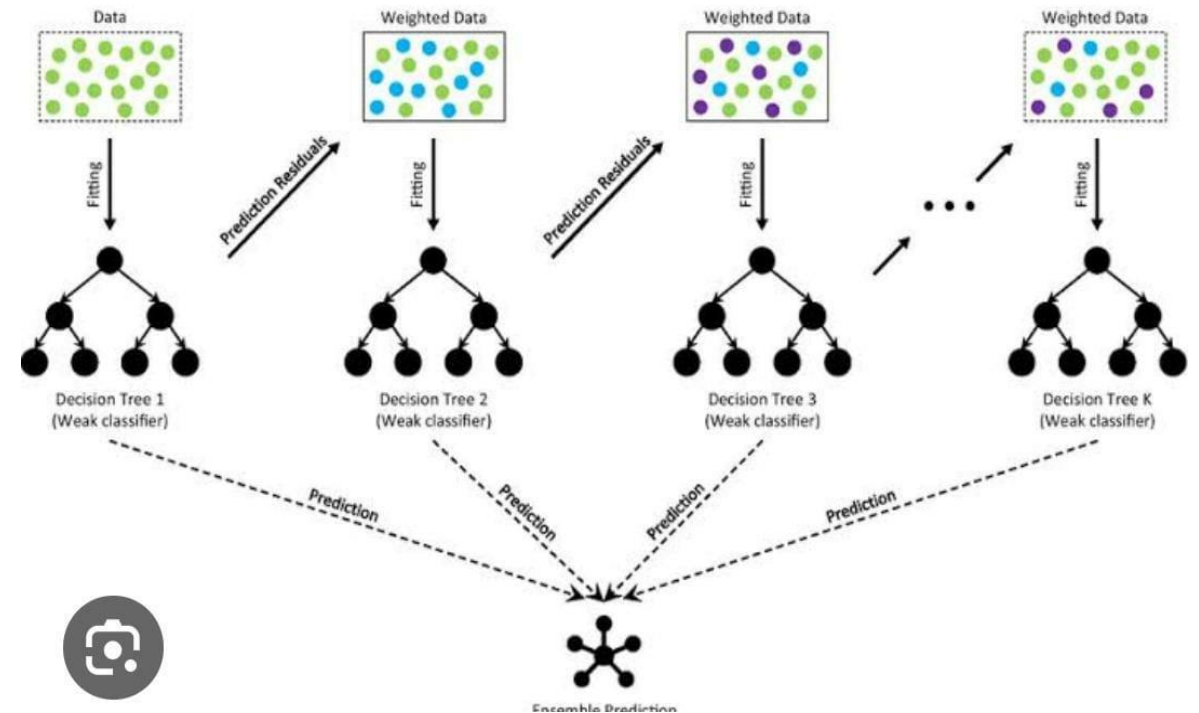
Weight1, weight2, ..., weight n are the initial weights



Machine Learning-Regression Algorithms

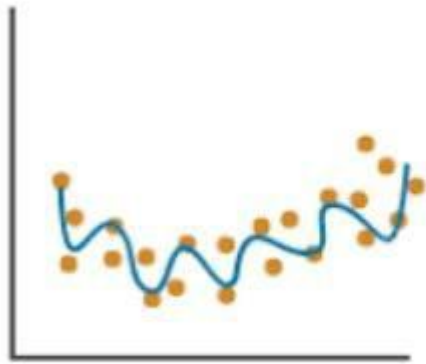
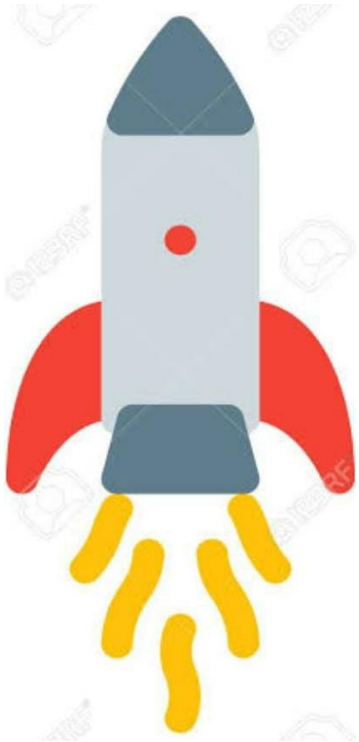
XG Boosting – Extreme Gradient Boosting

- Designed to improve Speed and performance
- Reliable and accurate predictive model
- Regularization - avoid overfitting

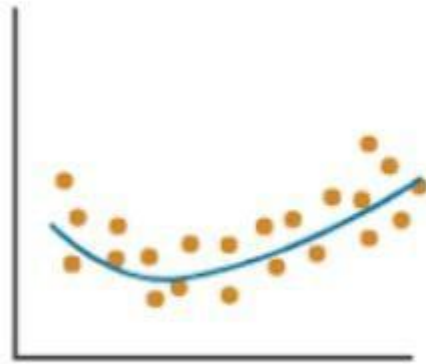


Machine Learning-Regression Algorithms

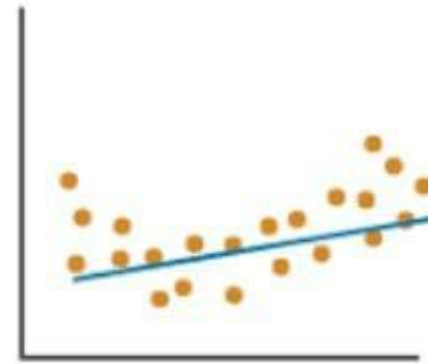
XG Boosting – Regularization (adding penalty parameters L1,L2)



Overfit – high variance
in the data



Good Fit – low bias,
low variance



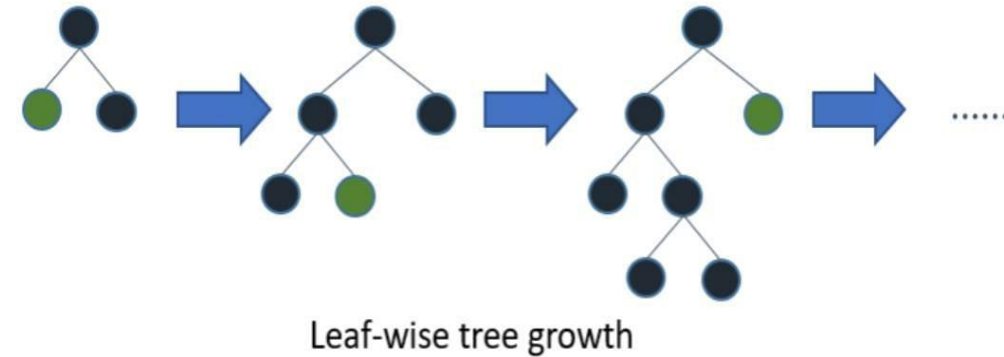
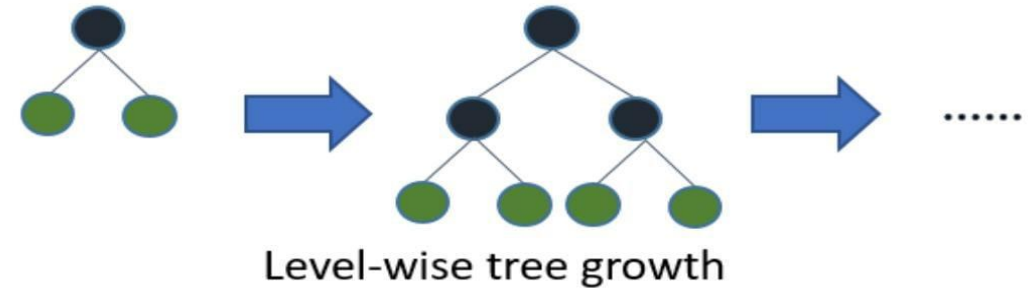
Underfit – High bias

Machine Learning-Regression Algorithms

LG Boosting (Light GBM)



- High speed (known as LightGBM)
- Handles large dataset and takes low memory
- Tree based learning algorithm
- Grows tree vertically (leaf-wise)
- Selects the leaf with the maximum delta loss to grow



Thank You