**Ensemble learning**

**Types:**

**1.**Bagging

* **Random forest**

**2.**Boosting

* **Adaboost ( Adapting boosting )**
* **Gradient tree boost**
* **Xgboost (Extreme Gradient boost)**

**1.Bagging(Bootstrap Aggregation)**

Bootstrap Aggregation (or Bagging for short), is a simple and very powerful ensemble method.

An ensemble method is a technique that combines the predictions from multiple machine learning algorithms together to make more accurate predictions than any individual model.

Bootstrap Aggregation is a general procedure that can be used to reduce the variance for those algorithm that have high variance. An algorithm that has high variance are decision trees, like classification and regression trees (CART).

**2. Booosting techniques :**

Follow this link for Ada & Gradient Boosting

<https://www.analyticsvidhya.com/blog/2015/11/quick-introduction-boosting-algorithms-machine-learning/?#>

For XgBoost follow this

https://www.analyticsvidhya.com/blog/2018/09/an-end-to-end-guide-to-understand-the-math-behind-xgboost/