

# ML with Python

Machine learning is a method that automates analytic model building

## Three types of Machine Learning algorithm

Supervised: You have labeled data and trying to predict label based off known features

Unsupervised: You have unlabeled data and trying to predict

Reinforcement

## ML Algorithms

Decision tree

Measure of split quality

Gini: Gini impurity

Entropy: information gain

Suffer from high variance (low accuracy)

Can be improved by using bagging (Bootstrap aggregation)

Consist of

Multiple decision trees (forest)

De-correlate the trees

Random Forest

Grow tree with random training sets

Grow tree with random training features

Generally more accurate than Decision tree