Machine Learning Algorithms

There are several classification algorithms available in machine learning. Here are some of the most commonly used ones:

1. **Logistic regression** is a machine learning algorithm used for classification tasks. It helps us predict the probability of an instance belonging to a specific class.
2. **Decision trees** create a tree-like model of decisions and their possible consequences. They split the data based on different attributes and make predictions based on the majority class of the instances in each resulting branch.
3. **Random Forest** is an ensemble method that combines multiple decision trees. It builds a collection of trees and makes predictions by averaging the outputs of individual trees.
4. **Naive Bayes** is a probabilistic algorithm based on Bayes' theorem. It assumes that the presence of a particular feature is independent of the presence of other features. It is fast and often used for text classification tasks.
5. **SVMs ( Support Vector Machine )** find the best hyperplane that separates the classes in a high-dimensional space. They maximize the margin between the decision boundary and the closest data points of each class.
6. **KNN ( K- Nearest Neighbor )** is a non-parametric algorithm that classifies instances based on their similarity to neighboring instances. It assigns a class label based on the majority vote of the k nearest neighbors.