

Machine Learning Algorithms That Are Mostly Used

An Algorithm is a series of steps that helps in solving specific problems. Machine Learning Algorithms helps us in providing mathematical equations which help in predicting the future by using the past behavior of the data.

There is no single algorithm which will help us in every task of machine learning, so we have to choose among many algorithms that can be used according to the task we are working on.

Here, in this article, I will take you through seven (7) most powerful and mostly used machine learning algorithms other than **Deep Learning**.

1.Linear Regression

Linear Regression is one of the easiest and one of the most popular Supervised Machine learning algorithms. It is a common statistical tool for modelling the relationship between some **explanatory** variables and some real-valued outcome. It predicts by simply computing a weighted sum of the input features, plus a constant called the **bias** term.

2.Logistic Regression

Just like a Linear Regression algorithm, the Logistic Regression Algorithm is also one of the most popular Supervised Machine Learning Algorithms. Logistic Regression models are mostly used in the problems of Binary Classification. One of all the machine learning algorithms, a Logistic

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Regression has provided over more than 95 per cent accuracy most of the times in the tasks of Binary Classification.

3. Decision Trees

Decision Trees are versatile Machine Learning algorithms that can perform both classification and regression tasks and even multi-output tasks. They are powerful algorithms, capable of fitting complex datasets.

Decision trees are also the fundamental components of Random Forests, which are among the most powerful algorithms available today.

4. Support Vector Machines

Support Vector Machines (SVMs) are particularly powerful and flexible class of supervised algorithms for both classification and regression. It tackles the sample complexity challenge by searching for **large margin** separators.

Roughly speaking, a half space separates a training set with a large margin if all the examples are not only on the correct side of the separating hyperplane but also far away from it.

5. Naive Bayes

In Machine Learning Naive Bayes models are a group of high-speed and simple classification algorithms that are often suitable for very high-dimensional datasets. Because they are so fast and have so few tunable parameters, they end up being very useful as a quick-and-dirty baseline for a classification problem.

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The Naive Bayes algorithm is a classical demonstration of how generative assumptions and parameter estimations simplify the learning process.

6.K-Means.

Many clustering algorithms are available in Scikit-Learn and elsewhere, but perhaps the simplest to understand is an algorithm known as **K-Means Clustering**, which is implemented in `sklearn.cluster.KMeans`.

The **K-Means** algorithm searches for a pre-determined number of clusters within an unlabeled multidimensional dataset.

7.Random Forest

The Random Forest algorithm is an ensemble of the **Decision Trees algorithm**. A Decision Tree model is generally trained using the **Bagging Classifier**. If we don't want to use a bagging classifier algorithm to pass it through the Decision Tree Classification model, we can use a Random Forest algorithm as it is more convenient and better optimized for Decision Tree Classification.