1. **Supervised**

Supervised Learning Algorithms:

- Logistic Regression

  Logistic regression is used to calculate the probability of a binary event occurring, and to deal with issues of classification

- K-Nearest Neighbors(K-NN)

  K-Nearest Neighbors is a machine learning technique and algorithm that can be used for both regression and classification tasks

- Support Vector Machine(SVM)

SVM is a supervised machine learning algorithm which can be used for classification or regression problems. It uses a technique called the kernel trick to transform your data and then based on these transformations it finds an optimal boundary between the possible outputs

- Kernel SVM

kernel basically in SVM help to create a hyperplane for doing the separation so that we can easily do the categorization, whether it is linearly separable or non-linearly separable

- Naive Bayes

Naive Bayes classification is a generative model . This is because it uses knowledge (or assumptions) about the underlying probability distributions that generate the data being analyzed-it is capable of generating new data points.. Discriminative models, in contrast, use no knowledge about the probability distributions that underlie a data set. They are not capable of generating new data points

- Decision Tree Classification

Decision trees is a non-linear classifier like the neural networks, etc. It is generally used for classifying non-linearly separable data. Even when you consider the regression example, decision tree is non-linear

- Random Forest Classification

Random Forest Classifier being ensembled algorithm tends to give more accurate result. This is because it works on principle, Number of weak estimators when combined forms strong estimator. Even if one or few decision trees are prone to a noise, overall result would tend to be correct.

1. **Unsupervised**

Unsupervised Learning Algorithms:

- K-Means Clustring

  The K in ‘K-means’ stands for the number of clusters we’re trying to identify. In fact, that’s where this method gets its name from. We can start by choosing two clusters.

- Hierarchical Clustring

Hierarchical clustering, also known as hierarchical cluster analysis, is an algorithm that groups similar objects into groups called clusters. The endpoint is a set of clusters, where each cluster is distinct from each other cluster, and the objects within each cluster are broadly similar to each other Probabilistic Clustring

1. **Reinforcement Learning Algorithm**

Model-Free Reinforcement Learning:

- Policy Optimization

Policy Optimization (TRPO). This algorithm is effective for optimizing large nonlinear poli-cies such as neural networks. Our experiments demonstrateitsrobustperformanceonawideva-riety of tasks: learning simulated robotic swim-ming, hopping, and walking gaits; and playing Atari games using images of the screen as input.

- Q-Learning

Q-learning is a model-free, off-policy reinforcement learning that will find the best course of action, given the current state of the agent.

Model-Based Reinforcement Learning:

- Learn the Model

Designed For Performers Interested In Careers In Acting For Film, Television, & New Media.

- Given the Model

“Model” is one of those terms that gets thrown around a lot in machine learning (and in scientific disciplines more generally), often with a relatively vague explanation of what we mean.