Machine Learning

Machine learning is a technique to implement AI than can learn from the data by themselves without being explicitly programmed.

## Types of machine learning:

1.>Supervised learning: >In Supervised learning, the machine learning algorithm learns from *Labelled data*

2.>Un-Supervised learning: >In Unsupervised learning, the machine learning algorithm learns from *un-labelled data*

3.>Reinforcement learning: >Reinforcement learning is an area of machine concerned with low intelligent agents take actions in an environment to maximize its rewards

# TYPES OF SUPERVISED LEARNING

## \*CLASSIFICATION :> Classification is about predicting a class or discrete values

example: Male or Female; true or false

Algorithms:

1. Decision tree classification
2. Random forest classification
3. K-nearest neighbor

## \*REGRESSION :>Regression is all about predicting a quantity or continuous values

Example: Salary; age; price.

Algorithms:

1. Logistic regression
2. Polynomial regression
3. Support vector machines

# TYPES OF UNSUPERVISED LEARNING

## \*Clustering: Clustering is an unsupervised task which involves grouping the similar data points

## \*Association: Association is an unsupervised task that is used to find important relationship between data points

\*Unsupervised learning Algorithm:

1. K-means clustering

2. Hierarchical clustering

3.Principal component analysis(pca)

4. Apriori

5. Eclat