MACHINE LEARNING BASICS

**What is Machine Learning?**

Machine Learning algorithms may access data (categorical, numerical, image, video, or anything else) and use it to learn for themselves without any explicit programming. But how does Machine Learning function exactly? simply by inspecting the data or facts (through instructions to observe the pattern and making decisions or predictions)

## Types of Machine Learning

Algorithmic approaches for machine learning may be divided into three categories.

1. Supervised Machine Learning – Task-Oriented (Classification – Regression)

2. Unsupervised Machine Learning – Fact or Data-Oriented (Cluster – Anomaly detection)

3. Reinforcement Machine Learning – Either learning from mistakes or learning from them correctly

## Supervised Machine Learning

In supervised learning, algorithms are trained using labelled datasets, and the algorithm learns about each category of input. The approach is evaluated using test data (a subset of the training set) and predicts the outcome when the training phase is over. Supervised machine learning is classified into two types:

1. Classification

2. Regression

## Classification Vs Regression

When there is a link between the input and output variables, regression methods are applied. It is used to forecast continuous variables such as weather and market movements, among others.

Classification methods are employed when the output variable is categorical, such as Yes-No, Male-Female, True-False, Normal – Abnormal, and so on.