1. Machine Learning means an algorithm which helps the computers to learn the patterns from the data. Contrary to traditional rule based programing, in machine learning the algorithm tries to establish a relationship between features and labels (independent variables and dependent variables) based on the data itself, without being explicitly programmed. The purpose of this learning is to predict an outcome for a similar but unknown data instance.
2. Machine learning shines in the following issues:
3. Prediction of Housing Prices, Prediction for Loan Default for new loan application
4. E Commerce Recommendation Systems
5. OTT Platform recommendation system
6. Computer Vision problems
7. Natural Language Processing problems
8. Labelled Training data consists of the training data and correct output for that training data. In other words, when the correct answer is given along with various features in the data, then we call this type of data as labelled data. The correct answer is called as label and the training attributes are called features.

For example, when we try to predict the heart attack chance based on a data set which consist of blood sugar, blood pressure, body weight, cholesterol as feature and whether heart disease exist as result then this type of data is called labelled data as the correct output is given with the dataset.

1. Regression and classifications task are performed under supervised category.
2. A. Detection of fraudulent financial transaction

B. Virtual Private Assistant

C. Image recognition

D. Recommendation problem

1. Re inforcement learning is suitable to handle this task
2. K Means clustering
3. Spam detection is Supervised algorithm
4. Online learning is a combination of different techniques of ML where data arrives in sequential order and the learning algorithm aims to learn and update the best predictor for future data at every step.