

## Program BASED Questions

### 1. Define Machine Learning?

Machine Learning is the science (and art) of programming computers so they can learn from data.

### 2. What is Candidate Elimination?

Candidate elimination algorithm incrementally builds the version space given a hypothesis space  $H$  and a set  $E$  of examples.

### 3. What is Decision Tree or ID3?

A decision tree is a non-parametric supervised learning algorithm, which is utilized for both classification and regression tasks.

### 4. What is Backpropagation?

The Back propagation algorithm in neural network computes the gradient of the loss function for a single weight by the chain rule.

### 5. What is Naive Bayes?

Naïve Bayes algorithm is a supervised learning algorithm, which is based on Bayes theorem and used for solving classification problems.

### 6. What EM and KMeans?

EM- Expectancy Maximization - expectation–maximization (EM) algorithm is an iterative method to find (local) maximum likelihood

Kmeans - K-Means Clustering is an Unsupervised Learning algorithm, which groups the unlabeled dataset into different clusters.

These algorithms are used to classify the dataset into various groups based on the similarities and dissimilarities

### 7. What is KNN?

K-Nearest Neighbours is an algorithm that stores all the available data and classifies a new data point based on the similarity.

### 8. What is Linear Regression?

Linear Regression is a machine learning algorithm based on supervised learning. It performs a regression task. Regression models a target prediction value based on independent variables. It is mostly used for finding out the relationship between variables and forecasting.

### 9. What is SVM?

A Support Vector Machine (SVM) is a very powerful and versatile Machine Learning model, capable of performing linear or nonlinear classification, regression, and even outlier detection.