ML algorithms

**Linear Regression :**

Predicts continuous values by fitting a linear relationship between data points.

Use cases: House price prediction , Sales prediction

**Logistic Regression:**

Classifies data into binary categories using a Sigmoid function

Use cases: cancer prediction, spam detection

**Decision Tree**

Splits data based on feature values to make decisions or classifications

Use cases: Customer segmentation , Loan approval

**Random Forest**

An collection of decision trees to improve accuracy and reduce overfitting

Use case: Movie recommendation system , Fraud detection

**Support Vector Machine (SVM)**

SVM tries to find the best boundary known as a hyperplane that separates different classes in the data.

Use case : Text recognition and image classification

**K-Nearest Neighbors (KNN)**

Classifies data based on the majority label among the nearest neighbors

Use case : Handwriting Recognition, Recommendation models

**K-Means Clustering**

Groups data points into clusters based on similarity without labels

Use case: customer segmentation , behavioural segmentation

**Naive Bayes**

Probabilistic classifier based on Bayes’ theorem assuming feature independence

Use case : Sentiment analysis , Game systems like chess

**Gradient Boosting Machines (GBM)**

Builds models sequentially to correct errors of prior models

Use case : Risk Prediction , Fraud detection