**Predictive Analytics**

It is the ability to make predictions or estimations of likelihoods about unknown future events based on the past or historic patterns. Predictive analytics will give us insight into “What might happen?”; it uses many techniques from data mining, statistics, modeling, machine learning, and artificial intelligence to analyze current data to make predictions about the future.

It is important to remember that the foundation of predictive analytics is based on probabilities, and the quality of prediction by statistical algorithms depends a lot on the quality of input data. Hence these algorithms cannot predict the future with 100% certainty. However, companies can use these statistics to forecast the probability of what might happen in the future and considering these results alongside business knowledge would result in profitable decisions.

Machine learning is heavily focused on predictive analytics, where we combine historical data from different sources such as organizational ERP (Enterprise Resource Planning), CRM (Customer Relation Management), POS (Point of Sales), Employees data, Market research data to identify patterns and apply statistical model/algorithms to capture the relationship between various data sets and further predict the likelihood of an event. Some examples of predictive analytics are weather forecasting, email spam identification, fraud detection, probability of customer purchasing a product or renewal of insurance policy, predicting the chances of a person with a known illness, etc.