3. Define problem category for below problem statement  
 “A chemist wants to find some interesting patterns in which patients are behaving upon administering the drug”

Ans: In this problem we will not predict or classify anything. We just club the patients with same characteristics of another patients, imagine that the characteristics of a patient is similar with same other patient’s characteristics. In this way the data of both patients will be clubbed in one cluster, this is called segmenting clustering which is known as unsupervised learning.

4. How will you select suitable machine learning algorithm for a problem statement

Ans: 1) Once we meet the client, we first understand their business. After understanding that what client wants, we design a problem statement,

2) then we start categorizing the problem statement whether he wants us to forecast result, he wants us to help in a decision-making strategy, he wants us to distribute his assets in most profitable manner or he wants us to build a model once for all to tune itself to the dynamic conditions without manual intervention.

3)we categorize the problem statement into 4:

a) Predictive/Forecasting: Whether we want to forecast something such as future stock price, tomorrow’s weather, etc.

b) Classification: example; we want to classify certain customers whether they will buy or not certain commodity.

c) Optimization: example; we want to optimize the revenue of the client such as where should he invest his money in.

d) Unsupervised learning: when we have unlabelled data and we want train model such as it will behave accordingly in dynamic conditions to give better accuracy.

4)Then according to the problem category we select the best suitable machine learning algorithm.

5.Define one problem statement for Education industry?

Ans:

“A teacher wants to predict how many students will be selected by for higher education by top universities based on their marks scored in entire course, their behaviour, their communication skills, their research work, their extra-curricular activities”

This in a Predictive/Forecasting problem in which the amount of students are predicted by the ML algorithm.