* <https://iccsea2021.org/sppr/index>  
  <https://csen2021.org/sipr/index>  
  <https://medprai2021.sciencesconf.org/>
* Pattern means the similarity or the common characteristics in/between objects. It can either be seen or felt in the physical world, or can be mathematically computed with the help of proper algorithms.
* Image processing  
  Computer Vision  
  Speech Recognition  
  Finger Print detection  
  Seismic analysis
* Features define an object. Using features, we can describe the characters or properties of an object. It qualifies or quantifies significant aspects of the respective object. Features can be represented either continuously or discretely.
* Feature vector refers to an n-dimensional vector containing the numerical features which defines the properties of an object. As a feature vectors is composed of multiple features, the term vector is in use.
* Classification is the task of interpreting and grouping objects into different categories. It is used to map function from input variables to discrete output variables. The algorithms used for classification predict the probability of an input data to fall into a particular group.
* Prior probability is the proportion of samples in the original population that belong to a respective class.
* Posterior probability is the probability of the occurrence of an event X given that the event Y has occurred. When the prior probability is updated, the new posterior probability is calculated.
* Probability Density Function (PDF) refers to the probability of observing the respective features of a class. It defines a probability distribution for discrete random variables.
* Naïve Bayes theory provides a mechanism to calculate the posterior probability of an event given another event which has already occurred. According to Naïve Bayes theory, the posterior probability is the product of Likelihood and Prior probability divided by the Probability Density Function.
* It is called “naïve” because it assumes that all the input variables are independent of each other. In other words, the probability of occurring a feature doesn’t have any effect on the probability of occurring another feature of that class.
* While calculating probabilities, we might have to multiply many small numbers which ranges from 0 to 1. There’s a possibility that the product of this multiplication will be too small which will lead to accuracy problem while comparing. To avoid this, we take the natural logarithm of those numbers and add them up for a better comparison in the end.
* Precision retorts what proportion of answers that were predicted as positives are actually correct.
* Recall answers what proportion of actual positives were identified correctly.
* F1 measure is the weighted average of precision and recall and is calculated through the harmonic mean of these two.
* The highest possible value of F1 measure is 1, which indicates the perfect score for both precision and recall. Thus the ‘1’ in F1.
* Type 1 errors are the False Positives.
* Type 2 errors are the False Negatives.
* Accuracy is the ratio of correctly classified samples and total sample. Let us understand how it can be misleading through an example:  
    
  Suppose, one designs a classifier which predicts everything as positive. Now there’s a case where 95% of the samples are actually positive. In this case, the classifier will work superbly as it is 95% accurate. But consider another case where only 5% of the samples are actually positive. Here, the classifier will fail miserably as this time, it will have an accuracy of only 5%.   
    
  So, it is not feasible to measure the performance of a classifier only by accuracy.