Naïve Bayes and KNN

**Learning Objectives of the session:**

* Gauging learner’s understanding on the topic of the week.
* Understanding the concepts clarity of the learners on:
  + Conditional probability, Naïve Bayes, Types of Naïve Bayes.
  + kNN algorithm, distances, finding k and its effect on the decision boundary, variations of nearest neighbor algorithm, pros and cons of KNN.
* Case Studies (Hands on) on the topics mentioned.
* Doubts solving, industry perspective and practices.
* Summary of the session’s learning.

**Structure of the Session**

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| **Time Distribution of 2 hours** | **Topic** | **Detail** |
| 10 min | * **Gauge learner’s understanding** on NB and KNN | * Go through all the learners in the group and try to understand the reach of the week’s learning within the group on the week’s topics. * Highlight the important concepts majority of the group is facing doubts on. |
| 20 min | * Concepts clarity of the covered topics. | * Clarify the concepts on the doubts identified. Ensure an understanding of the week’s learning across the groups. |
| 60 min | * Case study on naïve bayes and knn each. | * Use the case studies provided to have a hands on exercise. Explain the problem statement, features and data preprocessing and use various techniques to come to a result through the model. * Use adult.data and network\_intrusion.csv for the 2 case studies |
| 25 min | * Doubts clearance * Industry perspective on the mentioned topics | * Use this time to clarify additional doubts. * Also, explain the industry practices on the techniques as per your experience. |
| 5 min | * Summarize the session | * Provide a summary of the session. |