Statistical Learning - Probability Distributions

**Learning Objectives of the session:**

1. Probability concepts and Rules for Computing Probability(Multiplicative and Addition rule)
2. Marginal Probability and Bayes’ Theorem
3. Binomial, Poisson and Normal Distribution
4. Case study

**Structure of the Session**

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| **Time Distribution of 2 hours** | **Topic** | **Detail** |
| 10 mins | * Probability concepts and Rules for Computing Probability(Multiplicative and Addition rule) | * Probability concepts * Mutually exclusive events, Independent events * Rules for computing Probability |
| 20 mins | * Marginal Probability and Bayes’ Theorem | * Marginal probability concept and Example * Bayes’ Theorem and Example |
| 40 mins | * Binomial, Poisson, Normal distribution | * Binomial Distribution- Conditions, Mean and standard deviation, Example * Poisson Distribution and Example * Normal Distribution, Properties and example |
| 40 mins | * Case Study | * Case study/ Example on all the distributions |
| 10 mins | * Doubt Clearing | * Doubt clearing/discussions with participants and summarizing the session |