

Probability & Statistics

Probability: Sample Space, Events, Counting Sample Points, Probability of an event, Additive Rules, Conditional Probability, Multiplicative Rules, Independence, and Conditional Independence, Random Variables and Probability, Concept of Random Variable, Mathematical Expectation, Expectation and Variance, Covariance and Correlation. Discrete Distributions: Binomial, Negative Binomial, Poisson, and Hypergeometric. Continuous Distributions: Uniform, Normal, Exponential, and Beta. Joint Probability. Bayes Theorem and Prediction.