CIS 226: Statistical Methods (2 Units)

Department of Computer and Information Sciences

Covenant University
1. CIS226
1.1. CIS 226: Statistical Methods (2 Units)

Review of probability as a measure of uncertainty, sample points and events, combination of events. Binomial, Exponential, Normal, Gamma, Chi-Squared distributions; probability function, mean, variance, and moment generating function. Joint probability distribution and joint probability density function, marginal distribution, expected value, covariance and correlation; Statistical independence; Transformation of variable; Moment and moment generating function; Linear combination of random variable; Multinomial and Normal Bivariate distributions. Sampling distribution of , and S2; Central Limit Theorem; Approximation for discrete distributions; Sampling distribution for t and F. Point Estimation: Bias and unbiased estimator; principle of minimum variance unbiased estimation; Method of moment; Maximum Likelihood estimation. Interval Estimation: Population mean and difference between two population mean using z - distribution and t - distribution;