Suggested Practical List

The goal of this lab is to develop data interpretation skills. Following exercises are designed to enable students to understand data characteristics either by visualization or by interpreting computed measures. All the exercises are to be completed using MS Excel functions and graphs. At the end of each exercise, the student should be able to draw a conclusion and state in a concise manner.Teachers are expected to guide students to obtain real data available through the internet for the following exercises.

1. Plotting and fitting of Binomial distribution and graphical representation of probabilities.

2. Plotting and fitting of Multinomial distribution and graphical representation of probabilities.

3.Plotting and fitting of Poisson distribution and graphical representation of probabilities.

4.Plotting and fitting of Geometric distribution and graphical representation of probabilities.

5.Plotting and fitting of Uniform distribution and graphical representation of probabilities.

6.Plotting and fitting of Exponential distribution and graphical representation of probabilities.

7.Plotting and fitting of Normal distribution and graphical representation of probabilities.

8.Calculation of cumulative distribution functions for Exponential and Normal distribution.

9.Given data from two distributions, find the distance between the distributions.

10.Application problems based on the Binomial distribution.

11.Application problems based on the Poisson distribution.

12.Application problems based on the Normal distribution.

13.Presentation of bivariate data through scatter-plot diagrams and calculations of covariance.

14.Calculation of Karl Pearson’s correlation coefficients.

15.To find the correlation coefficient for a bivariate frequency distribution.

16.Generating Random numbers from discrete (Bernoulli, Binomial, Poisson) distributions.

17.Generating Random numbers from continuous (Uniform, Normal) distributions.

18.Find the entropy from the given data set.