CAP748:PROBABILITY AND STATISTICS-LABORATORY

Course Outcomes: Through this course students should be able to

CO1 :: Analyze statistical data graphically using frequency distributions and cumulative frequency distributions.

CO2 :: Employ real-world problems into probability models.

CO3 :: Calculate e probabilities, and derive the marginal and conditional distributions of bivariate random variables.

CO4 :: Use appropriate technology to aid problem-solving and data analysis

CO5 :: Employ methods related to these concepts in a variety of data science applications.

List of Practicals / Experiments:

Google spreadsheets

- google spreadsheets introduction
- formatting google spreadsheets
- spreadsheet formulae

Probability

- implementation of probability (generation of random numbers)

Statistics

- computing measures mean, median, mode
- computing measures of dispersion quartile
- computing measures of dispersion

Descriptive statistics

- implementation of covariance
- implementation of correlation, skewness, kurtosis

Probability distribution

- implementation of frequency distribution table

Statistical computation

- implementation of curve fitting, polynomials, straight lines
- implementation of exponential curves
- implementation of regression, chi-square test

Text Books:

1. PROBABILITY AND STATISTICS FOR ENGINEERS by DR. J. RAVICHANDRAN, WILEY

References:

1. APPLIED STATISTICS AND PROBABILITY FOR ENGINEERS by DOUGLAS C. MONTGOMERY, GEORGE C. RUNGER, WILEY

2. PROBABILITY AND STATISTICS FOR COMPUTER SCIENCE WITH MICROSOFT EXCEL by W.J. DECOURSEY, NEWNES PUBLISHERS