ABUSVAC02 - Introduction to Business Analytics

Learning Objectives

Studies core statistical techniques; data retrieval, analysis and mining; Decision modeling to effectively persuade in the project-oriented world of data-driven decisions.

> To understand the purpose of using business analysis tools within an organization, dataset for making a business decisions and R studio for data analysis.

Course Outcomes

Upon completion of this course, the student will have the ability to

- Critically analyze the business problems especially solves business problems.
- Recognize, understand and apply the language, theory and models of the field of business analytics
- Students can able to understand the applications of business analytics.
- They have get ideas on data visualization and time series analysis.
- Compare the application of using R statistics

Unit I Introduction to Business Analytics and Big Data

Business Analytics – Definition - Need – Scope - A categorization of Analytical Methods – Analytics in action – Big data – Business analytics in practice – types of data – modifying data in excel – creating Distributions from data– measures of location

Unit II Application of Business Analytics

Machine Learning - Introduction and Concepts - Differentiating algorithmic and model based frameworks, Decision analytics. Descriptive analytics - Predictive analytics - Prescriptive analytics.

Unit III Decision support and Data Visualisation

DSS- Executive and enterprise support- Automated decision support - Web analytics- Data mining -Applied artificial intelligence - Visual analysis: Data concepts – Data Dashboards - Data exploration & visualization - Scorecards

Unit IV Time Series and Forecasting

Time series pattern – forecasting accuracy – moving averages and exponential smoothing - using regression analysis for forecasting – determining the best forecasting model to use - building good spreadsheet model – What-If analysis – some useful excel functions for modeling – auditing spreadsheet model – a simple maximization problem.

Unit V Data Analysis using R

R Studio: Introduction – R data types and objects, reading and writing data - Data structures in R - R programming fundamentals - Advantages and disadvantages of using R.

Text Books:

Bernard Marr, Big Data: Using Smart Big Data, Analytics and Metrics to Make Better Decisions and Improve Performance, Wiley, 2015

Camm, J,.D., J. James., Cochran., Michael., J. Fry., Jeffrey, W., Ohlmann., David R. and Anderson. Essentials of Business Analytics, Cengage Learning, 2015

Majid Nabavi, and D. L.Olson. Introduction to Business Analytics, Business Expert Press, 2018

Sandhya Kuruganti. Business Analytics: Applications to Consumer Marketing, McGraw Hill, 2015

Supplementary Readings:

 Hodeghatta, U.R. and Umesha Nayak. Business Analytics Using R - A Practical Approach- Apress, 2017.