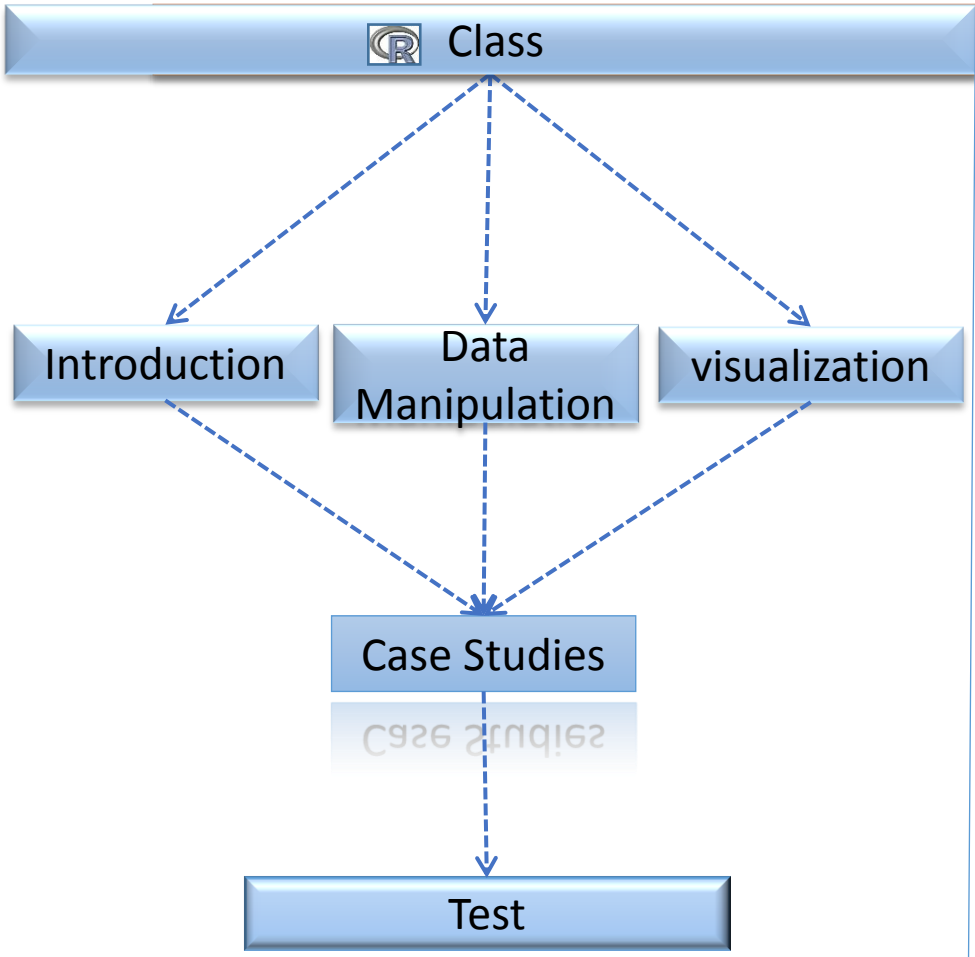
COMPLETE ANALYTICS

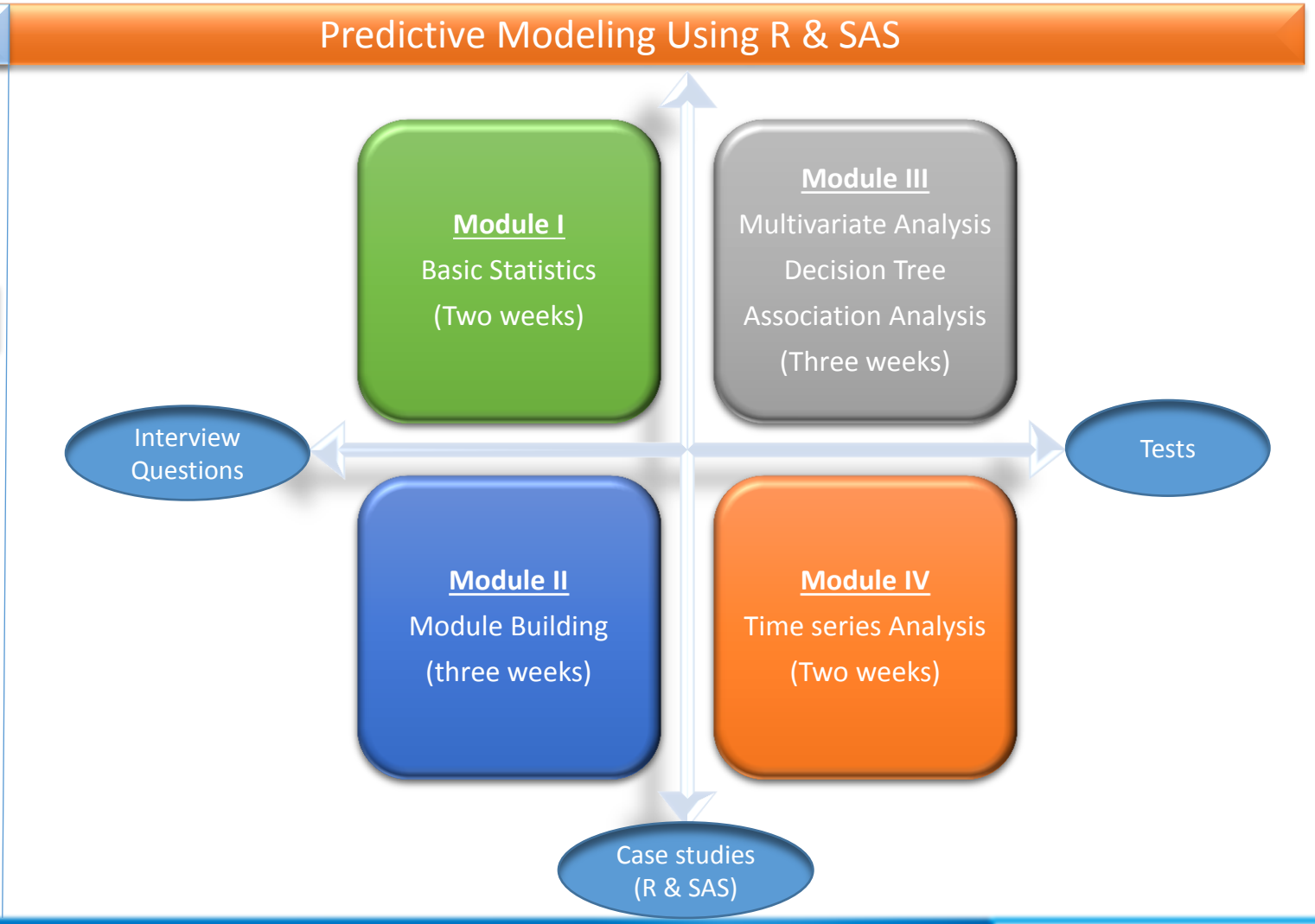
Predictive Modeling Course Contents

Snapshot of Predictive Modeling course content

Duration: Three Weeks (24 hours)



Duration: Ten Weeks (80 hours)



Course Content – R

Introduction to R

- Introduction to R – History, Windows of R, Application, Why R?, compared with other software.
- Data Structures in R – Vector, List, Matrix & Data Frame.
- R Workspace
- Packages in R – What is Package, How to install package, How to use?
- Reading, writing a dataset
- First steps with a dataset – head, tail, summary, class, list, ls()
- Working on case study
- Discussion of case study and understand optimal way of writing code.

Course Content – R

Data Manipulation in R

- Adding new columns
- Deleting columns
- Functions
- Indexing
- Subsetting Data
- Control Structures
- Merge
- Reshape
- Dplyr package- Select, Filter, mutate, summarize etc.,
- Pipeline function
- Usage of SQLDF package
- Working on case Study

Visualization in R

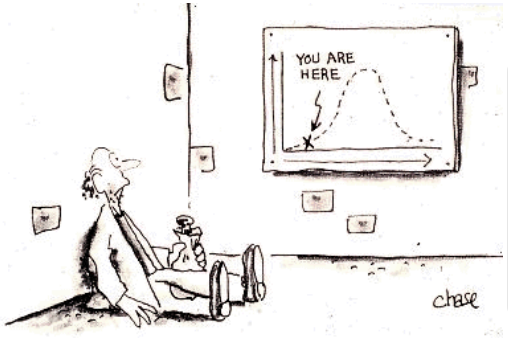
- Plotting with base grapg – Histogram, Scatter, Boxplot, Bargraph, line graph etc.,
- Plotting with ggplot2 – Histogram, Scatter, Boxplot, Bargraph, line graph etc.,
- Working on case study

Course Content – Module I

Descriptive Statistics

I. Measure of central Tendency – Mean, Median and Mode
II. Measure of dispersion –Range, variance, SD and CV
III. Measure of Shape – Skewness and Kurtosis

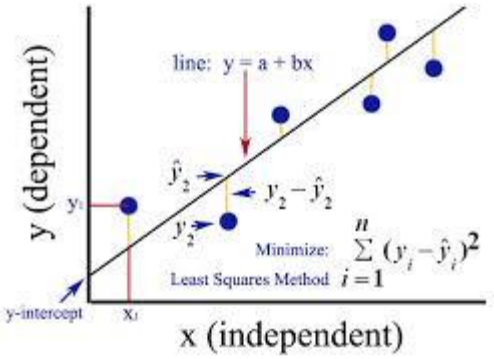
Testing of Hypothesis



I. Types of Hypothesis
II. Application of Testing of hypothesis
III. Steps in testing of hypothesis
IV. Parametric and Non parametric test (T Test, Z test, Paired T test, ANOVA and Chi square test)

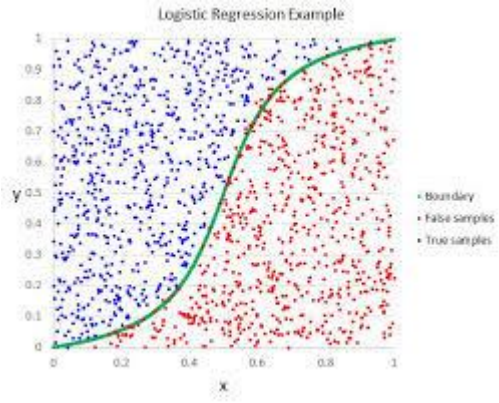
Course Content – Module II

Correlation And Regression



I. Introduction about correlation and Regression
II. Simple and Multiple Regression
III. Assumption of Regression
IV. Model Validation
V. Dummy variable Regression
VI. Variable selection Technique – Forward, Backward and Stepwise Regression

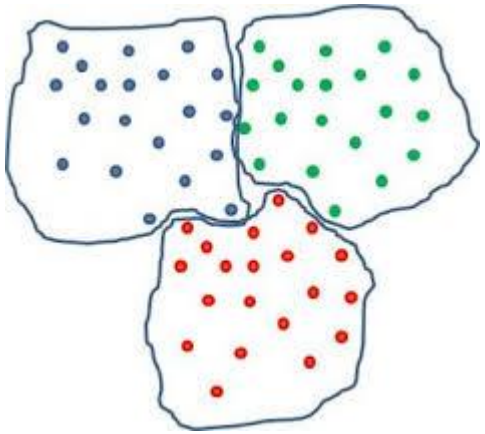
Logistic Regression



I. Introduction and its application
II. Why Logistic Regression
III. Logistic Regression Equation form
IV. Data Preparation for logistic regression
V. Case study
VI. Model Validation
VII. Interpretation of output
VIII. Scoring

Course Content – Module III

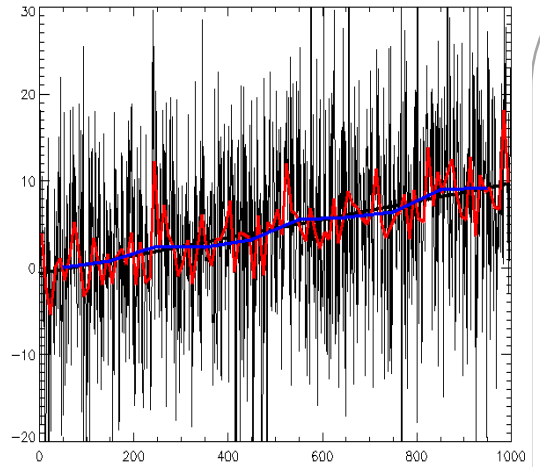
Multivariate Analysis

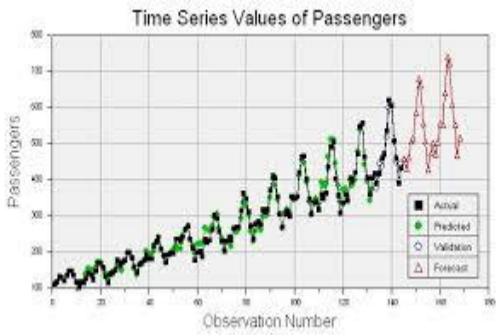


I. Cluster Analysis
    I. Euclidean Distance
    II. Hierarchical cluster : Linkage, centroid and Wards methods
    III. Non Hierarchical cluster (K Means cluster)
II. Factor Analysis
    I. How to decide number of factors
    II. Varmax Rotation
III. Conjoint Analysis
IV. Market Basket Analysis
    I. Support
    II. Confident
    III. Lift
V. Decision Tree –
    I. CHAID
    II. CART

Course Content – Module IV

Time Series Analysis





I. Time Series Component
II. Smoothing Technique –
    I. Moving average and
    II. Exponential smoothing
III. Forecasting
    I. Trend Forecasting
    II. Auto Regression
    III. Moving Average
    IV. ARIMA Model
        I. Identification
        II. Estimation
        III. Diagnosis
        IV. Forecasting

For More Details

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