Hewlett Packard Enterprise

Course Datasheet

Big Data Analytics (Programming with R)

Education Services course product number – HPE-BDA-v1.0
Course length – 40 Hrs.
Delivery mode – Instructor Led Training (ILT)
Virtual Instructor Led Training (vILT)

Course Objective

This course is an ideal package for individuals who want to understand the basic concepts of Business Analytics and also making you familiar with the field of Analytics using R language. Completing this course will make learner able to construe what goes behind the processing of huge volumes of data and preparing an individual for a job in the Big Data analytics space.

Prerequisite

- Basics of programming language
  - Concepts of OOP
  - Basics of scripting language
- Basics of Linux/Unix operating systems
- Good understanding of Java programming language
  - Core Java
- Understanding of basic SQL statements

Course Modules

Chapter 1 – Introduction to Business Analytics

- Introduction to Business Analytics & its Features
- Types of Business Analytics
- Business Analytics Case Studies
- Business Decisions
- Business Intelligence
- Data Science and its importance

Chapter 2 - Introduction to R

- Introduction to R
- Understanding R

- Using R to illustrate the basic concepts
- Installing R and RStudio
- Integrated Development Environments (IDEs) for R
- Using R Console
- Scripting in R
- R Workplace and Packages
- Distributed R
    - Introduction
    - Installation
    - Programming Concepts

Chapter 3 - R Programming

- Introduction
- Operators in R (Arithmetic, Relational, Logical, Assignment)
- Basic and Advance Data Types
- Loops and Conditional Statement in R
- Commands to Run an R Script and a Batch Script
- Functions in R
- String Manipulation in R
- Dplyr Package – An Overview
- Installing Dplyr
- Functions of the Dpylr package

Chapter 4 - R Data Structure

- Types of Data Structures in R
- Vectors
- Scalars
- Matrices
- Arrays
- Data Frames
- Factors
- Lists
- Elements of the Different Data Structures in R
- Acceptable Formats to Import and Export Data in R

Chapter 5 - Data Visualization

- Graphics in R
- Types of Graphics
- Basic elements of graph
- Methods to Save Graphics as Files
- Procedure to Export Graphs in RStudio

Chapter 6 - R Connection with Database

- Introduction to RDBMS
- Introduction to MySql
- R packages to connect to database
- Data analysis of data from database

Chapter 7 – Debugging in R

- Introduction to Debugging
- Important Function to Debug

Chapter 8 - Statistics in R

- Introduction to Statistics
- Types of Data
- Qualitative vs Quantitative Analysis
- Hypothesis Testing in R
- Need of Hypothesis Testing in Businesses
- Test of mean
- Test of variance
- Chi-square Test
- Non-parametric Test
- Linear Regression
- Basics of Classification
- Basics of Clustering