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Learning Style: On Demand

Technology:

Difficulty: Beginner

Course Duration: 5 Hours

Introduction to R

About this course:

The Introduction to R is a primary course for aspiring data scientists who are currently working with Microsoft Excel, Matlab, Mathematica or SAS for numerical analysis of large sets of data. The course enables the candidates in using more powerful OpenSource environments especially the R programming language. R is a

functional programming environment employed by many data analysts and data scientists, easily accessible to non-programmers and naturally extending a skill set that is common to data analysts and data scientists. It's the perfect tool for when the one has a statistical, numerical, or probabilities-based problem based on real data and they've pushed those tools past their limits. This fundamental course covers all the necessary topics required to kick start the candidates in working with R programming language.

This introductory course provides a complete coverage of the fundamentals of R programming language, including its uses, benefits and applications. The students who enroll in this course will move one step closer to become accomplished data scientists. The course covers the umbrella of technologies that are on the leading edge of data science development focused on R and related tools.

Course Objective:

- R Language and Mathematics
- How to work with R Vectors
- How to read and write data from files, and how to categorize data in factors
- How to work with Dates and perform Date math
- How to work with multiple dimensions and DataFrame essentials
- Essential Data Science and how to use R with it
- Visualization in R
- How R can be used in Spark

Audience:

- Beginner level data analysts
- Data scientists who need to learn the essentials of how to program in R
- Graduating students aspiring to become data scientists
- Analysts working with MS Excel, Matlab, Mathematica or SAS

Prerequisite:

- The R programming language course requires the students to have functional knowledge and basic skills of SQL and databases.
- In addition to this, no prior knowledge of R or any other programming language is required.

Course Outline:

Chapter 01 - Introduction to R

- **Topic A: About R - Part 1**
- About R - Part 2
- About R - Part 3
- **Topic B: RStudio - Part 1**
- RStudio - Part 2
- RStudio - Part 3

- **Topic C: Workspaces - Part 1**
- Workspaces - Part 2
- Workspaces - Part 3
- **Topic D: Basic Types - Part 1**
- Basic Types - Part 2
- Basic Types - Part 3

Chapter 02 - Variables

- **Topic A: Basic Types Demo - Part 1**
- Basic Types Demo - Part 2
- Basic Types Demo - Part 3
- **Topic B: Dates Demo - Part 1**
- Dates Demo - Part 2
- Dates Demo - Part 3
- **Topic C: Variables - Part 1**
- Variables - Part 2
- Variables - Part 3
- **Topic D: Missing Values - Part 1**
- Missing Values - Part 2
- Missing Values - Part 3

Chapter 03 - Data Structures and Operators

- **Topic A: Vectors - Part 1**
- Vectors - Part 2
- Vectors - Part 3
- **Topic B: Matrices - Part 1**
- Matrices - Part 2
- Matrices - Part 3
- **Topic C: Arrays - Part 1**
- Arrays - Part 2
- Arrays - Part 3
- **Topic D: Lists and Factors - Part 1**
- Lists and Factors - Part 2
- Lists and Factors - Part 3
- **Topic E: Arithmetic and Relational Operators - Part 1**
- Arithmetic and Relational Operators - Part 2
- Arithmetic and Relational Operators - Part 3
- **Topic F: Logical and Assignment Operators - Part 1**
- Logical and Assignment Operators - Part 2
- Logical and Assignment Operators - Part 3

Chapter 04 - Data Frames and Tables

- **Topic A: Data Frames - Part 1**
- Data Frames - Part 2
- Data Frames - Part 3
- **Topic B: Working with Data Frames - Part 1**
- Working with Data Frames - Part 2

- Working with Data Frames - Part 3
- **Topic C: Data Tables - Part 1**
- Data Tables - Part 2
- Data Tables - Part 3
- **Topic D: Working with Data Tables - Part 1**
- Working with Data Tables - Part 2
- Working with Data Tables - Part 3
- **Topic E: Shortcuts - Part 1**
- Shortcuts - Part 2
- Shortcuts - Part 3