Introduction to R Programming for Data Science & Analytics

Course ID #: 7000-754-ZZ-Z
Hours: 21

Course Content

Course Description:

In this course, you will cover common scenarios encountered in analysis and present practical solutions. This course provides indoctrination in the practical use of the umbrella of technologies that are on the leading edge of data science development focused on R and related tools. Working in a hands-on learning environment, led by our expert practitioner, you'll learn R and its ecosystem, and where it's a better a tool than Excel.

Course Objectives:

Working in a hands-on learning environment you'll explore:

- Data Science essentials
- R programming Essentials
- Variables and Types, Loops, R Scalars, Vectors, and Matrices
- String and Text Manipulation, List & Functions
- DataFrames and File I/O
- Reading data from files and data prep
- Visualization
- Exploration With Dplyr
- Statistical Modeling With R
- Data Exploration
- Regressions
- R and Big Data

Prerequisites:

Students should have intermediate-level experience in their field, and prior experience working with programming languages.

Target Audience:

Data Analysts and Data Scientists who need to learn the essentials of how to program in R.

Topics:

Lesson 1: Data Science Essentials

- Data Science
- Process of Doing Data Science

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Lesson 2: Introducing R

- R Essentials
- Variables and Types
- Control Structures (Loops / Conditionals)
- R Scalars, Vectors, and Matrices
  - Defining R Vectors
  - Matrices
- String and Text Manipulation
  - Character data type
  - File IO
- Lists
- Functions
  - Introducing Functions
  - Closures
  - lapply/sapply functions
- DataFrames

Lesson 3: Intermediate R

- DataFrames and File I/O
- Reading data from files
- Data Preparation
- Built-in Datasets
- Visualization
  - Graphics Package
  - plot() / barplot() / hist() / boxplot() / scatter plot
  - Heat Map
  - ggplot2 package (qplot(), ggplot())
- Exploration With Dplyr

Lesson 4: Analytics with R

- Statistical Modeling With R
  - Statistical Functions
  - Dealing With NA
  - Distributions (Binomial, Poisson, Normal)
- Data Exploration
- Regressions
  - Linear Regressions
  - Logistic Regressions
- Text Processing (tm package / Wordclouds)
- R and Big Data

Register for this class by visiting us at:
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