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PHOENIX TS

Data Analysis Level 2 Training

Course Overview

This 3-day instructor-led course will expand students' knowledge of data analytics by covering advanced data analytics topics. Providing insight on data visualization, exploratory data analysis and the use of machine algorithms, this course will help students enhance their proficiency in data analytics using R. Through this advanced course, students will learn how to control the entire analytic process by deciphering large amounts of data and effectively communicating the information they derive. This course provides students with the core skills necessary to handle any data intensive analytic project and generate clarity, insight, and confidence in order to make sound and measurable business decisions. This course will also bridge the gap between team members that can often cause a project to be unsuccessful. Topics include Linear Regression, predictive modeling basics, classification models, Segmentation modeling, spreadsheet models and data analysis using R.

it is recommended that participants take Data Analysis Level 1 before taking Data Analysis Level 2.

Course Objectives

By the end of this course, participants will be able to:

- Understand and leverage different distribution models, and how each are applied.
- Determine how the concept of liner regression demonstrates the relationships between data.
- Build and understand predictive models, including decision trees and regression models.
- Identify classification models and understand how data is used to predict certain outcomes.
- Use cluster analysis tools and techniques to understand data
- Display and Organize data in linear optimization models
- Identify R programming language and understand how to use R language to build statistical models

Course Outline

Module 1: Linear Regression - Part 1



- Correlation
- Simple Linear Regression
- Multiple Linear Regression
- Fit Measures

Module 2: Predictive Modeling Basics

- Data Preparation
- Data Cleansing
- Integrating Data from Multiple Sources
- Common Issues

Module 3: Linear Regression

- Predictive vs Explanatory Modeling using Regression.
- Overfitting vs Underfitting
- Splitting data into Training/Validation subsets
- Multicollinearity
- Feature Subset Selection Models

Module 4: Classification Models

- K-Nearest Neighbor
- Distance Function
- Similarity Function
- Combination Function
- Choosing k
- Advantages/Disadvantage

Module 5: Segmentation Modeling / Cluster Analysis

- Clustering
- Clustering vs. Classification
- K-Means Clustering
- Clusters Interpretation
- Hierarchical Clustering
- Segmentation



Module 6: Spreadsheet Models / Optimization

- Linear Optimization Models
- Maximizing Profit / Minimizing Cost

Module 7: Data Analysis using R

- Introduction to R
- Data Analysis using R
- Reading Data
- Data Type in R
- Clustering in R
- Regression in R

Starting at **\$1,485**

ATTENTION

For GSA pricing or Contractor quotes call
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