Revolution R Enterprise Professional Certification

Demonstrate your expertise with the most sought after R-Analytics skills for the Enterprise Revolution R Enterprise Professional Certification

is the industry's first certification on advanced analytics for big data using ***Revolution R Enterprise***, the Big Data Big Analytics platform based on the R statistical programming language.

Experts forecast a huge talent gap in advanced analytics in the coming years. At Revolution Analytics AcademyR, we are employing our industry expertise in advanced analytics to address this data science skills gap.

Revolution Analytics Certified Specialist

- R is the most widely used statistical language today. It's the number 1 choice of data scientists with more than two million users worldwide.
- Offering high-performance, scalable, enterprise analytics, ***Revolution R Enterprise*** supports a variety of analytical capabilities including exploratory data analysis, model building and model deployment.
- Candidates must prove their abilities in using Revolution R Enterprise for industry ready advanced analytics projects.
- Revolution Analytics Certification Examinations are scheduled as an online or onsite proctored exams. We recommend registration few weeks before to ensure your preferred date and time, but an advanced registration before 72 hrs is mandatory.

Onsite proctored: Revolution Analytics conducts the certification exam through a global network of kryterion sponsored testing centers.

Online proctored: This feature allows you to take the certification exam remotely using your own computer. The exams are monitored by a proctor through the webcam that you are using for the exam.

Audience

Statisticians, data scientists, data modelers and hands-on practitioners who use Revolution R Enterprise for their analytics needs. Whether you're a student, new to R and analytics, changing careers, or already serving as an R expert on project teams, Revolution Analytics Certification can get your career on the right path or take it to the next level.

Exam Structure

Candidates who have earned this credential would have passed a proctored examination:

- 60 multiple choice questions (must achieve a score of 70% to pass the examination)
- 90 minutes to complete the examination

Topics

Topics to be covered in this examination include:

1. Introduction to Big Data Analytics
2. R as a programming language
3. Big Data Management in Revolution R Enterprise
4. Big Data Exploration and Statistical analysis using Revolution R Enterprise
5. Advanced Big Data Analytics - Modeling in Revolution R Enterprise

1. Introduction to Big Data Analytics (5%)

Objectives

- Describe the characteristics of big data and associated challenges
- Understand technology and architectural strategy for big data

Study Resources

- What is data science? O'Reilly
- Real-Time Big Data Analytics: Emerging Architecture
- Fast, Powerful and Cost-Effective Analytics Reshaping Business Competition Worldwide
- The Rise of Big Data Spurs a Revolution in Big Analytics

2. R as a programming language (25%)

Objectives

- Perform Simple Manipulations on numbers and vectors
- Perform operations on arrays and matrices
- Understanding of objects, their modes and attributes.
- Perform operations on ordered and unordered factors.
- Use lists and data frames for more complex operations
- Use basic pre-built functions in R
- Write your own functions in R
- Understand scoping rules
- Recognize different types of objected oriented programming in R
- Customizing the R environment
- R installation and Administration

Study Resources

- Venebles, Smith and R Development Core Team, "Introduction to R"
- 'R in Action'
- Burns, R Inferno (Optional)

3. Big Data Management in Revolution R Enterprise (30%)

Objectives

- Import and export large data from data sources
- Compute summary statistics on large data
- Compute cross tabulation on data sets.
- Perform different types of data manipulations such as transforming, subsetting, merging, recording, sorting and aggregation
- Visualize large data sets

Study Resources

- RevoScaleR User Guide, Chapters 1 to 4,15 to 17
- RevoScaleR Data step

4. Big Data Exploration and Statistical analysis in Revolution R Enterprise (20%)

Objectives

- Perform data summaries and crosstabs on large data
- Perform correlation and variance/Covariance Matrices
- Analyze a scenario and determine the methods to deploy for variable selection
- Analyze a scenario and deploy appropriate statistical tests
- Use unsupervised learning techniques (e.g. k-means clustering)

Study Resources

- RevoScaleR User Guide, Chapters 5, 6, 12
- Kabacoff, R in Action Chapter 7,14 (Optional)

5. Advanced Big Data Analytics - Modeling in Revolution R Enterprise (20%)

Objectives

- Describe the steps for training a set of data in order to identify new data based on known data
- Describe the critical steps in model selection, prediction, validation and scoring
- Identify the use cases for logistic regression, Bayes theorem
- Estimate generalized linear models with large data
- Use decision trees and forests for classification and regression
- Perform simulations in parallel using tools provided by Revolution R Enterprise

Study Resources

- RevoScaleR User Guide, Chapters 5, 6, 12
- Big data decision trees with R
- James, Witten, Hastie & Tibshirani– Introduction to Statistical Learning (Chapters 1-4, 6, 8, 10)
- Kabacoff, R in Action, Chapter 8, 13 (Optional)
- Kuhn, Max Applied Predictive Modeling with R. (Optional)