



R Essentials Primer for Data Science & Analytics

QuickStart to R for Data-Focused Skills Covering R Basics, Vectors, Files, Dates, Multiple Dimensions & More

www.triveratech.com

Course Snapshot

- **Course: TTDS6682: R Essentials Primer for Data Science & Analytics**
- **Duration:** 2 days
- **Skill Level:** Introduction to R for experienced attendees working in data science or analytics roles
- **Audience:** This basic level course provides an excellent kick start for users new to R programming, such as Data Science Analysts, Developers, Administrators, Architects, Managers and technical Executives.
- **Hands-on Learning:** This course is approximately **40% hands-on lab to 60% lecture ratio**, combining engaging lecture, demos, group activities and discussions with light machine-based practical programming labs and exercises. Student machines are required. We offer more in-depth courses with more extensive hands-on labs. Please inquire for details.
- **Delivery Options:** This course is available for **onsite private classroom presentation, live online virtual presentation**, or can be presented in a **flexible blended learning format** for combined onsite and remote attendees. Please also ask about our **Self-Paced / Video / QuickSkills or Mini-Camp Flex Hours / Short Course** options.
- **Public Schedule:** This course has active dates on our live-online open enrollment **Public Schedule**.
- **Customizable:** This course agenda, topics and labs can be further adjusted to target your specific training skills objectives, tools and learning goals. Please inquire for details.

Overview

R Essentials Primer for Data Science is a quick start style, light hands-on course that takes students currently working with Excel (or SAS or another data tool) for numerical analysis and helps them to get started using more powerful Open Source environments including 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.

In this course we present common scenarios that are encountered in analysis and present practical solutions. Some attention is paid to data science theory including AI grouping theory. A discussion of using R with libraries are included and prepares the user for using Spark/R (and SparklyR).

NOTE: For deeper hands-on coverage or R Programming for Data Science please consider **TT6683 JumpStart Hands-On R Programming for Data Science & Analytics**, a variation of this course with more advanced hands-on and concepts.

Learning Objectives

This course is approximately **40% hands-on lab to 60% lecture ratio**, combining engaging lecture, demos, group activities and discussions with light machine-based practical programming labs and exercises. 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, students will learn R and its ecosystem, and where it's a better a tool than Excel.

Students will explore:

- Moving from Excel to R
- R Basics
- Vectors
- Reading and Writing Files
- Dates
- Multiple Dimensions
- Overview of R in Data Science

Need different skills or topics? If your team requires different topics or tools, additional skills or custom approach, this course may be further adjusted to accommodate. We offer additional R Programming, Python, data science, AI / machine learning / deep learning and other related topics that may be blended with this course for a track that best suits your needs. Our team will collaborate with you to understand your needs and will target the course to focus on your specific learning objectives and goals.

Audience & Pre-Requisites

This is an **Introductory** course, geared for **Data Analyst and Data Scientists** who need to learn the essentials of how to program in R. Incoming students should have prior experience working with Excel or SAS, and should know the basics of SQL.

Follow On Courses: Our core R and Python programming, data science, analytics, AI and machine learning training courses provide students with a solid foundation for continued learning based on role, goals, or their areas of specialty. Please inquire for next step recommendations based on your goals.

Enhanced Learning Services: Please also ask about our **Pre-Training Class OnRamp & Prep / Primer** offerings, **Skills Gap Assessment Services, Case Studies, Knowledge Check Quizzes, Skills Immersion Programs & Camps, Collaborative Mentoring Services and Extended Learning Support & Post Training** services.

Course Topics / Agenda

Please note that this list of topics is based on our standard course offering, evolved from typical industry uses and trends. We'll work with you to tune this course and level of coverage to target the skills you need most. Topics, agenda and labs may adjust during live delivery based on audience skill-level, needs and participation.

- 1. From Excel to R**
 - Common problems with Excel
 - The R Environment
 - Hello, R
 - CRAN
- 2. R Basics**
 - Simple Math with R
 - Working with Vectors
 - Functions
 - Comments and Code Structure
 - Using Packages
- 3. Vectors**
 - Vector Properties
 - Creating, Combining, and Iterating
 - Passing and Returning Vectors in
- 4. Reading and Writing Files**
 - Text Manipulation
 - Factors
- 5. Dates**
 - Working with Dates
 - Date Formats and formatting
 - Time Manipulation and Operations
- 6. Multiple Dimensions**
 - Adding a second dimension
 - Indices and named rows and columns in a Matrix
 - Matrix calculation
- 7. Overview of R in Data Science**
 - n-Dimensional Arrays
 - Data Frames
 - Lists
 - AI Grouping Theory
 - K-means
 - Linear Regression
 - Logistic Regression
 - Elastic Net
- 8. Next Steps**
 - Powerful Data through Visualization: Communicating the Message
 - R in Spark
 - Demo(s)

Student Materials: Each participant will receive a **Student Guide** with course notes, code samples, software tutorials, step-by-step written lab instructions, diagrams and related reference materials and resource links. Students will also receive the project files (or code, if applicable) and solutions required for the hands-on work.

Hands-On Setup Made Simple! Our dedicated tech team will work with you to ensure our 'easy-access' cloud-based course environment is accessible, fully-tested and verified as ready to go well in advance of the course start date, ensuring a smooth start to class and effective learning experience for all participants. Please inquire for details and options.

For More Information

All courses can be presented **onsite** or **online**, or in a **combined / flex / blended learning format**, tailored to target your specific audience, needs and learning goals. We also offer focused, flexible **short courses, self-paced learning** options, **recorded sessions**

and more. We train beginner to advanced skills in all areas we cover, and offer **New Hire / Cohort Training, Boot Camps, Skills Immersion Programs, Reskilling Programs, Skills Migration & Transition Programs**, and more. We collaborate with you to ensure all courses are truly targeted to meet your specific needs and learning skills, maximizing your valuable training time, as well as your important budget.

Please also visit our extensive **Public Training Schedule** for training for smaller groups or individuals. Please contact us for course details, **Corporate Rates** and **Special Discount Offers**.

For more information about our dedicated training services, collaborative coaching services, courseware licensing and development services, public course schedule, training management services, partner programs, or to see our complete list of course offerings and special offers please visit us at www.triveratech.com, email Info@triveratech.com or call us toll free at **844-475-4559**. Our pricing and services are always satisfaction guaranteed.

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