Advanced ggplot2 in R Training Course

Professional Development Training Course Outline

Category	Research and Data Analysis	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

Advanced ggplot2 in R training course is meticulously designed for data analysts, statisticians, and data scientists seeking to elevate their data visualization skills to a professional level. Leveraging the power of the ggplot2 package, participants will learn to create high-impact, publication-ready visualizations, uncover hidden patterns in data, and convey insights with precision and clarity. This course integrates real-world case studies, hands-on exercises, and industry-relevant datasets to ensure participants gain practical expertise in exploratory data analysis (EDA), predictive analytics, and storytelling with data.

Through this course, learners will master advanced visualization techniques, including interactive plotting, complex faceting, custom themes, and aesthetic mapping. Emphasis is placed on best practices in visualization design, data storytelling, and reproducible workflows using R. By the end of the training, participants will be equipped to transform raw data into actionable insights, craft dynamic dashboards, and contribute effectively to data-driven decision-making in business, research, or academia.

Programme Curriculum

Advanced ggplot2 in R Training Course

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5 days

Course Objectives

Participants completing this course will be able to:

1. Master advanced ggplot2 plotting techniques for complex data visualization.
2. Apply custom themes and aesthetics to enhance visualization clarity.
3. Create interactive and dynamic visualizations using ggplot2 extensions.
4. Perform advanced faceting and layering for multi-dimensional data.
5. Integrate ggplot2 with tidyverse workflows for efficient data handling.
6. Implement data storytelling techniques to convey actionable insights.
7. Visualize time-series, geospatial, and multivariate data effectively.
8. Optimize plot readability and design principles for presentations.
9. Use annotated plots and statistical overlays for analytical reporting.
10. Develop reproducible visualization workflows in RMarkdown and Shiny.
11. Incorporate real-world case studies for industry-relevant learning.
12. Troubleshoot and debug ggplot2 plots efficiently.
13. Apply emerging visualization trends to modern analytics projects.

Target Audience

1. Data Analysts
2. Data Scientists
3. Business Intelligence Professionals
4. Statisticians
5. Researchers in Academia
6. R Programmers
7. Financial Analysts
8. Marketing Analysts

Course Modules

Module 1: ggplot2 Fundamentals - Beyond Basics

- Recap of ggplot2 essentials with advanced use cases
- Layered grammar of graphics for complex plots
- Mapping data aesthetics for advanced visual insights
- Introduction to ggplot2 extensions
- **Case Study:** Visualizing customer segmentation patterns

Module 2: Custom Themes & Aesthetics

- Designing professional, publication-ready plots

- Using color palettes for impactful visualization
- Modifying fonts, labels, and plot annotations
- Dynamic theming with ggthemes and custom CSS
- **Case Study:** Marketing campaign performance dashboards

Module 3: Advanced Faceting & Multi-Panel Plots

- Faceting by multiple variables
- Nested faceting techniques
- Conditional plotting for complex datasets
- Scaling and layout management for large plots
- **Case Study:** Comparative sales analysis across regions

Module 4: Statistical Overlays & Annotations

- Adding regression lines, confidence intervals, and smoothers
- Annotating key data points and events
- Highlighting outliers for analytical insights
- Using geom_text and geom_label for clarity
- **Case Study:** Financial risk trend analysis

Module 5: Time-Series & Forecast Visualizations

- Plotting temporal trends with ggplot2
- Highlighting seasonality and anomalies
- Integrating forecasting results in plots
- Customizing axes for temporal clarity
- **Case Study:** Stock market trend visualization

Module 6: Geospatial & Map Visualizations

- Integrating ggplot2 with spatial data
- Visualizing geospatial distributions with geom_sf
- Choropleth maps for actionable insights
- Combining maps with statistical overlays
- **Case Study:** Regional sales performance heatmap

Module 7: Interactive Visualizations & Extensions

- Introduction to ggplotly for interactive plots
- Dynamic dashboards with Shiny integration
- Animating plots using gganimate
- Exporting interactive visualizations for web reports
- **Case Study:** Interactive KPI dashboards for executives

Module 8: Reproducible Workflows & Automation

- Creating reproducible plots with RMarkdown
- Automating visual reports for stakeholders
- Version control and collaborative visualization practices
- Optimizing code for large datasets
- **Case Study:** Automated monthly business performance report

Training Methodology

This course employs a participatory and hands-on approach to ensure practical learning, including:

- Interactive lectures and presentations.
- Group discussions and brainstorming sessions.
- Hands-on exercises using real-world datasets.
- Role-playing and scenario-based simulations.
- Analysis of case studies to bridge theory and practice.
- Peer-to-peer learning and networking.
- Expert-led Q&A sessions.
- Continuous feedback and personalized guidance.

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Online	$1,000

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

Ready to enroll or request a customized program? Book online or contact us:

Register Online Now

Email: info@fineskilltrainingcenter.com | Website: www.fineskilltrainingcenter.com