Tidyverse Training

COURSE CONTENT

About Multisoft

Train yourself with the best and develop valuable in-demand skills with Multisoft Systems. A leading certification training provider, Multisoft collaborates with top technologies to bring world-class one-on-one and certification trainings. With the goal to empower professionals and business across the globe, we offer more than 1500 training courses, which are delivered by Multisoft's global subject matter experts. We offer tailored corporate training; project Based Training, comprehensive learning solution with lifetime e-learning access, after training support and globally recognized training certificates.

About Course

The Tidyverse is a powerful ecosystem of R packages designed to simplify data manipulation, exploration, and visualization. Multisoft Systems offers an expertly structured Tidyverse Training program that enables learners to work effortlessly with modern data workflows. Whether you are a data analyst, business intelligence professional, researcher, or aspiring data scientist, this training equips you with the skills needed to handle complex datasets with clarity and precision.

Module 1: Introduction to R and Tidyverse

- ✓ Overview of R programming
- ✓ What is the Tidyverse ecosystem
- ✓ Benefits of using Tidyverse in data analysis
- ✓ Installing and loading Tidyverse packages
- ✓ Understanding tidy data principles

Module 2: Working with Tibbles

- ✓ Introduction to tibble vs data.frame
- ✓ Creating and converting tibbles
- ✓ Viewing, subsetting, and modifying tibbles
- ✓ Best practices for handling tabular data

Module 3: Data Importing with readr

- ✓ Introduction to readr package
- ✓ Importing CSV, TSV, and other structured files
- ✓ Parsing and transforming data types
- ✓ Writing data back to files
- ✓ Handling large datasets efficiently

Module 4: Data Manipulation with dplyr

- ✓ Grammar of data manipulation
- ✓ Using verbs: select, filter, mutate, arrange, summarise, group_by
- ✓ Handling missing values
- ✓ Working with pipelines using %>%
- ✓ Combining datasets with joins (inner, left, right, full, semi, anti)
- ✓ Using case_when, across, and advanced transformations

Module 5: Data Tidying with tidyr

✓ Understanding tidy vs untidy data

✓ Reshaping data: pivot_longer, pivot_wider

✓ Nesting and unnesting datasets

✓ Separating and uniting columns

✓ Dealing with messy or inconsistent data

Module 6: Data Visualization with ggplot2

✓ Grammar of Graphics overview

✓ Creating basic plots: scatter, bar, line, histogram, boxplot

✓ Aesthetic mappings: color, size, shape, facets

✓ Themes, labels, and annotations

✓ Building advanced multi-layered visualizations

✓ Exporting and saving charts

Module 7: Functional Programming with purrr

✓ Introduction to functional programming concepts

✓ Using map(), map_df(), map_chr(), and other map variants

✓ Iterating efficiently without loops

✓ Automating repetitive operations

✓ Applying functions over lists and complex objects

Module 8: Working with Strings, Dates, and Factors

✓ Using stringr for text cleaning and manipulation

✓ Handling dates and times with lubridate

✓ Managing categorical data with forcats

Module 9: Data Workflow & Reproducibility

✓ Creating efficient data analysis workflows

- ✓ Using pipes and modular coding techniques
- ✓ File organization and project structure
- ✓ Version control basics (optional)
- ✓ Improving readability and reproducibility