

Tableau Course

Module 1: Introduction to Data Visualization and Power of Tableau

- What is Data Visualization?
- Comparison and Benefits Against Reading Raw Numbers
- Real Use Cases From Various Business Domains
- Some Quick and Powerful Examples Using Tableau Without Going into the Technical Details of Tableau
- Installing Tableau
- Tableau Interface
- Connecting to DataSource
- Tableau Data Types
- Data Preparation

Module 2: Architecture of Tableau

- Installation of Tableau Desktop
- Architecture of Tableau
- The Interface of Tableau (Layout, Toolbars, Data Pane, Analytics Pane, etc.)
- How to Start with Tableau
- The Ways To Share and Export the Work Done in Tableau

Hands-on Exercise:

- Play with Tableau desktop
- Learn about the Interface
- Share and Export Existing Works

Module 3 - Working with Metadata and Data Blending

- Connection to Excel
- Cubes and PDFs
- Management of Metadata and Extracts
- Data Preparation
- Joins (Left, Right, Inner, and Outer) and Union
- Dealing with NULL Values, Cross-Database Joining, Data Extraction, Data Blending, Refresh Extraction, Incremental Extraction, How to Build Extract, etc.

Hands-on Exercise:

- Connect to Excel Sheet to Import Data
- Use Metadata and Extracts
- Manage NULL values
- Clean up Data Before Using
- Perform the Join Techniques
- Execute Data Blending from Multiple Sources

Module 4 - Creation of Sets

- Mark, Highlight, Sort, Group, and Use Sets (Creating and Editing Sets, In/Out, Sets in Hierarchies)
- Constant Sets
- Computed Sets, Bins, etc.

Hands-on Exercise:

- Use Marks to Create And Edit Sets
- Highlight The Desired Items
- Make Groups
- Apply Sorting on Results
- Make Hierarchies Among the Created Sets

Module 5 - Working with Filters

- Filters (Addition and removal)
- Filtering continuous dates, dimensions, and measures
- Interactive Filters, marks card, and hierarchies
- How to create folders in Tableau
- Sorting in Tableau
- Types of sorting
- Filtering in Tableau
- Types of filters
- Filtering the order of operations

Hands-on Exercise:

- Use the Data Set by Date/Dimensions/Measures to Add a Filter
- Use Interactive Filter to View the Data
- Customize/Remove Filters to View the Result

Module 6 - Organizing Data and Visual Analytics

- Using Formatting Pane to work with menu, fonts, alignments, settings, and copy-paste
- Formatting data using labels and tooltips
- Edit axes and annotations
- K-means cluster analysis
- Trend and reference lines
- Visual analytics in Tableau
- Forecasting, confidence interval, reference lines, and bands

Hands-on Exercise

- Apply labels and tooltips to graphs, annotations, edit axes' attributes
- Set the reference line
- Perform k-means cluster analysis on the given dataset
- Use marks to create and edit sets

Module 7 - Working with Mapping Preview

- Working on coordinate points
- Plotting longitude and latitude
- Editing unrecognized locations
- Customizing geocoding, polygon maps, WMS: web mapping services
- Working on the background image, including add image
- Plotting points on images and generating coordinates from them
- Map visualization, custom territories, map box, WMS map
- How to create map projects in Tableau
- Creating dual axes maps, and editing locations

Hands-on Exercise:

- Plot longitude and latitude on a geo map
- Edit locations on the geo map
- Custom geocoding
- Use images of the map and plot points
- Find coordinates
- Create a polygon map
- Use WMS

Module 8 - Working with Calculations and Expressions

- Calculation syntax and functions in Tableau
- Various types of calculations, including Table, String, Date, Aggregate, Logic, and Number
- LOD expressions, including concept and syntax
- Aggregation and replication with LOD expressions
- Nested LOD expressions
- Levels of details: fixed level, lower level, and higher-level
- Quick table calculations
- The creation of calculated fields
- Predefined calculations
- How to validate

Module 9 - Working with Parameters Preview

- Creating parameters
- Parameters in calculations
- Using parameters with filters
- Column selection parameters
- Chart selection parameters
- How to use parameters in the filter session
- How to use parameters in calculated fields
- How to use parameters in the reference line

Hands-on Exercise

- Creating new parameters to apply on a filter
- Passing parameters to filters to select columns
- Passing parameters to filters to select charts

Module 10 - Charts and Graphs

- Dual axes graphs
- Histograms
- Single and dual axes
- Box plot
- Charts: motion, Pareto, funnel, pie, bar, line, bubble, bullet, scatter, and waterfall charts
- Maps: tree and heat maps
- Market basket analysis (MBA)
- Using Show me
- Text table and highlighted table

Module 11 - Dashboard and Stories

- Building and formatting a dashboard using size, objects, views, filters, and legends
- Best practices for making creative as well as interactive dashboards using the actions
- Creating stories, including the intro of story points
- Creating as well as updating the story points
- Adding catchy visuals in stories
- Adding annotations with descriptions; dashboards and stories
- What is dashboard?
- Highlight actions, URL actions, and filter actions
- Selecting and clearing values
- Best practices to create dashboards
- Dashboard examples; using Tableau workspace and Tableau interface
- Learning about Tableau joins
- Types of joins
- Tableau field types
- Saving as well as publishing the data source
- Live vs extract connection
- Various file types

Hands-on Exercise

- Create a Tableau dashboard view, include legends, objects, and filters
- Make the dashboard interactive
- Use visual effects, annotations, and descriptions to create and edit a story

Module 12 - Tableau Prep

- Introduction to Tableau Prep
- How Tableau Prep helps quickly combine join, shape, and clean data for analysis
- Creation of smart examples with Tableau Prep
- Getting deeper insights into the data with a great visual experience
- Making data preparation simpler and accessible
- Integrating Tableau Prep with Tableau analytical workflow
- Understanding the seamless process from data preparation to analysis with Tableau Prep
- Module 13 - Integration of Tableau with R and Hadoop
- Introduction to the R language
- Applications and use cases of R
- Deploying R on the Tableau platform
- Learning R functions in Tableau
- The integration of Tableau with Hadoop

Hands-on Exercise:

- Deploy R on Tableau
- Create a line graph using the R interface
- Connect Tableau with Hadoop to extract data

Complimentary Modules:

- Resume Writing
- Soft Skills training