



Tableau: Data Visualization/Business Intelligence Tool

Tableau is 10-100x faster than existing solutions. It's designed to support how people think. Drag and drop on the canvas. Leverage your natural ability to spot visual patterns quickly. Experience an analytics solution built for speed and ease of use. Whether it's in a spreadsheet, a SQL database, Hadoop, or the cloud, you can connect to any data, anywhere. Access big data with a click. Combine disparate data sources without writing code. Discover what all your data has to say. Creating interactive presentations. Control the narrative while allowing your audience to explore. Real analytics demands more than a pretty dashboard. Build new calculations from existing data, drag in reference lines and forecasts, and access statistical summaries. Experiment with trend analyses, regressions and correlations.

Types:

1. **Desktop**- Tableau Desktop is a product that everyone can use to ask new questions, spot trends, identify opportunities, and make data-guided decisions with confidence.
2. **Online**- Now it's easy for a business of any size to share insights in the cloud. Tableau Online makes business intelligence faster and easier than ever before. Publishing dashboards with Tableau Desktop and sharing them with colleagues, partners or customers. Deploying world-class business intelligence with a few clicks. No hardware required. Start with a few users, and add more when you're ready. Viewing dashboards from the office, at home or on the road. Filter and drill down using Tableau Mobile. Edit any existing view, from the Web or from a tablet. Keeping your data secure is our top priority. Only your authorized users can interact with your data and dashboards. Use single sign-on to make security easy for your trusted users. Our expert team works around the clock to keep your data secure, while you focus on your business.
3. **Server**- Extend the value of your data across your organization with Tableau Server. Empower your business with the freedom to explore data in a trusted environment—without limiting them to pre-defined questions, wizards, or chart types. And have the peace of mind that your data is governed and secure. Connect to any data source securely - whether on premise or in the cloud. Publish and share your data sources for everyone to use. Work with popular enterprise data sources like Cloudera Hadoop, Oracle, AWS Redshift, cubes, Teradata, Microsoft SQL Server, and more. Use our web data connector and APIs to access hundreds more data sources.

Tableau Desktop Course Content:

1. **Introduction**
 - a. Getting Started
 - b. Tableau Interface
 - c. Distributing and Publishing
2. **Connecting to Data**
 - a. Getting Started with Data
 - b. Managing Metadata
 - c. Managing Extracts



- d. Data preparation with Text and Excel files
- e. Joins
- f. Data Blending
- 3. **Visual Analytics**
 - a. Granular Level Analysis
 - b. Sorting
 - c. Grouping
 - d. Creating and Working with Sets
 - e. Filtering
 - f. Parameters
 - g. Formatting
 - h. Trend and Reference lines
 - i. Forecasting
 - j. Clustering
- 4. **Dash boarding and Stories**
 - a. Building Dashboard
 - b. Layouts and Formatting
 - c. Story Points
 - d. Dashboard Interactivity using Actions
- 5. **Mapping**
 - a. Maps in tableau
 - b. Editing Unrecognized locations
 - c. Custom Geocoding
 - d. Background Images
- 6. **Calculations**
 - a. Calculation Syntax
 - b. Introduction to LOD expressions
 - c. Intro to Table calculations
 - d. Modifying Table Calculations
 - e. Aggregate Calculations
 - f. Date Calculations
 - g. Logic Calculations
 - h. Number, String and Type Calculations
- 7. **Building Charts**
 - a. Using a parameter to Change fields
 - b. Cleaning data by Bulk Re-aliasing
 - c. Bollinger Bands
 - d. Bar, Line, Pie and Basic charts
 - e. Bump Charts
 - f. Control Charts
 - g. Funnel Charts
 - h. Pareto Charts
 - i. Waterfall Charts
 - j. Heat Maps
 - k. Scatter Plots



I. Box and Whisker Plots

Teradata: RDBMS

Teradata is a popular Relational Database Management System (RDBMS) suitable for large data warehousing applications. It is capable of handling large volumes of data and is highly scalable. This course provides a good understanding of Teradata Architecture, various SQL commands, Indexing concepts and Utilities to import/export data.

1. Teradata Overview

- a. Basic Relational Concepts
- b. Competitive Advantage over other RDBMS
- c. Architecture
- d. Teradata Components
- e. Interaction between the components
- f. Tools and Utilities

2. Teradata Indexes and Join Strategies

- a. Primary Key and Primary Index differences
- b. Primary Index and Secondary Index Types
- c. Data Retrieval using Primary and Secondary Index
- d. Advantages of PPI
- e. Join Strategies

3. Teradata SQL

- a. Data types
- b. DDL Statements (CREATE, ALTER, DROP)
- c. DML Statements (Insert, Delete, Update)
- d. DCL Statements (Grant, Revoke)
- e. Order by, Group by and Distinct
- f. SET Operators, Logical & Conditional Operators
- g. String functions, Cast & Format functions
- h. HELP and Show Functions
- i. Date Functions and Built-In Functions
- j. Aggregation
- k. Joins (INNER and OUTER)

4. SQL Advanced

- a. Sub queries
- b. Upsert, Case and Coalesce
- c. Nullif
- d. Temporary Tables
- e. Explain
- f. Rank and Row Number

5. Teradata Utilities

- a. Fast load
- b. Multi load



- c. BTEQ
- d. Fast Export
- e. TPT

SAS: Statistical Analysis System

SAS is a software suite that can mine, alter, manage and retrieve data from a variety of sources and perform statistical analysis on it. SAS provides a graphical point-and-click user interface for non-technical users and more advanced options through the SAS programming language. SAS is the largest market-share holder in "advanced analytics"

SAS Course Content:

Base SAS

1. Introduction to SAS Programming
 - a. Introduction: History
 - b. SAS Windows contents
 - c. SAS Studio on SAS University edition
 - d. SAS data sets Parts of a SAS program
 - e. Modes for submitting a SAS program
 - f. How SAS language works
 - g. DATA-STEP's built-in loop
 - h. Program data vector (PDV)
 - i. Getting your data into SAS
 - j. Temporary vs. permanent SAS data sets
 - k. Working with data
 - l. Creating and redefining variables.
2. Data Transformations
 - a. Creating and redefining variables revisited
 - b. NUMERIC and CHARACTER
 - c. Working with SAS dates
 - d. SAS Formats and Informats
 - e. PUT & INPUT Functions
 - f. Conditional variable creation
 - g. Title and Footnotes
 - h. ODS Statements
 - i. _NULL_
 - j. Debugging
 - k. Reading Unstructured Data
3. Loops and Arrays
 - a. Do Loops
 - b. Do Until and DO While
 - c. Retain and Sum Statements
 - d. Arrays
4. Combining Data Sets





- a. Appending Data sets using Data step
 - b. Append Procedure
 - c. Data Step Merge
 - d. Using IN option to merge data sets
5. SAS Procedures
- a. Proc Contents
 - b. Proc Print
 - c. Proc Sort
 - d. Proc Copy
 - e. Proc Compare
 - f. Proc Means
 - g. Proc Freq
 - h. Proc Transpose
 - i. Proc Export
 - j. Proc Import
 - k. Proc Format
 - l. Proc Datasets
6. SQL
- a. Introduction to Syntax
 - b. Querying the data
 - c. Creating Tables
 - d. Updating and Dropping Tables
 - e. Dropping Columns
 - f. Table Constraints
 - g. Sub-Queries
 - h. Inline Queries
 - i. Grouping
 - j. Joins – Inner and Outer
7. Macros
- a. Introduction to Macro concept
 - b. Macro Flow Architecture
 - c. Macro Tokens
 - d. Creating and Resolving Macro variables
 - e. Creating Macros
 - f. Debugging
 - g. Macro Functions
 - h. Looping using Macros
 - i. Auto call Functionality

