Tableau Advanced 2-Day Class

Course Duration: 2 Days

Audience: This two day course is designed to provide you with the skills required to become a Tableau power user. The course is designed for the professional who has solid working experience with Tableau and wants to take it to the next level. You should have a deep understanding of all the fundamental concepts of building worksheets and dashboards, but may scratch your head when working with more complex issues.

Prerequisites: Tableau Fundamentals and/or equivalent

Learning Objectives: At the end of this class, the student will be able to:

- Build advanced chart types and visualizations
- Build complex calculations to manipulate your data
- Work with statistics and statistical techniques
- Work with parameters and input controls
- Implement advanced geographic mapping techniques and use custom images and geocoding to build spatial visualizations of non-geographic data
- Implement all options in working with data: Joining multiple tables, data blending, performance considerations and working with the Data Engine, sharing your connections as meta data, and understand when to implement which connection method.
- Build better dashboards using techniques for guided analytics, interactive dashboard design and visual best practices
- Implement many efficiency tips and tricks
- Understand the basics of Tableau Server and other options for sharing your results

Course includes: This course will include extensive hands-on activities to re-enforce the skills and knowledge attained.

Course Topics:

Introduction and Getting Started

- Why Tableau? Why Visualization?
- The Tableau Product Line
- Level Setting – Terminology
- Getting Started – creating some powerful visualizations quickly
- Review of some Key Fundamental Concepts
Filtering, Sorting & Grouping – Filtering, Sorting and Grouping are fundamental concepts when working with and analyzing data. We will briefly review these topics as they apply to Tableau

- Advanced options for filtering and hiding
- Understanding your many options for ordering and grouping your data: Sort, Groups, Bins, Sets
- Understanding how all of these options inter-relate

Working with Data – In the Fundamentals class, we accepted the data for what it is! (with a basic overview of blending and joining data and working with the data engine). In the Advanced class, we will understand the difference between joining and blending data, and when we should do each. We will also consider the implications of working with large data sets, and consider options for when and how to work with extracts and the data engine. We will also investigate best practices in “sharing” data sources for Tableau Server users.

- Data Types and Roles
  - Dimension versus Measures
  - Data Types
  - Discrete versus Continuous
  - The meaning of pill colors
- Database Joins
- Data Blending
- Working with the Data Engine / Extracts and scheduling extract updates
- Working with Custom SQL
- Adding to Context
- Switching to Direct Connection
- Building meta data via shared Data Source connections
- Performance considering and working with big data
- OLAP considerations (Overview)

Working with Calculated Data and Statistics – In the Fundamentals Class, we were introduced to some basic calculations: basic string and arithmetic calculations and ratios and quick table calculations. In the Advanced class, we will extend those concepts to understand the intricacies of manipulating data within Tableau

- A Quick Review of Basic Calculations
  - Arithmetic Calculations
  - String Manipulation
  - Date Calculations
  - Quick Table Calculations
  - Custom Aggregations
  - Custom Calculated Fields
  - Logic and Conditional Calculations
  - Conditional Filters
• Advanced Table Calculations
  o Understanding Scope and Direction
  o Calculate on Results of Table Calculations
  o Complex Calculations
  o Difference From Average
  o Discrete Aggregations
  o Index to Ratios
• Understanding where Calculations Occur
• Statistics
  o Reference / Trend Lines
  o Statistical Calculations
  o Summary Stats
  o Cohort Analysis
• Working with Dates and Times
  o Continuous versus Discrete Dates
  o Dates and Times
  o Reference Dates

Advanced Mapping – The Fundamentals class taught us the basics of Geographic Mapping. In the Advanced Class, we will learn the intricacies of working with the mapping function within Tableau including working with custom geographies and geo-coding, working with an alternate WMS server and spatially visualizing non-geographic data

• Fundamentals Review: Building basic maps
  o Fixing geographies
  o Geographic Fields
  o Map Options
• Built-in Demographics / Layering
• WMS – working with a Web Map Service
• Importing Custom Geographies
• Assigning Geographies to Non-Geographic fields
• Distance Calculations
• Spatially Visualizing non-Geographic Data using background images and geo-coding

Working with Parameters – In the Fundamentals class, we were introduced to parameters – How to create a parameter and use it in a calculation. In the Advanced class, we will go into more details on how we can use parameters to modify our title, create What-If analysis, etc

• Parameter Basics
  o Data types of parameters
  o Using parameters in calculated fields
  o Inputting parameter values and parameter control options
• Advanced Usage of Parameters
  o Using parameters for titles, field selections, logic statements, Top X
Building Advanced Chart Types and Visualizations / Tips & Tricks – This topic covers how to create some of the chart types and visualizations that may be less obvious in Tableau. It also covers some of the more common tips & tricks / techniques that we use to assist customers in solving some of their more complex problems.

- Bar in Bar
- Box Plot
- Bullet Chart
- Custom Shapes
- Gantt Chart
- Heat Map
- Pareto Chart
- Spark Line
- KPI Chart

Best Practices in Formatting and Visualizing

- Formatting Tips
  - Drag to Legend
  - Edit Legend
  - Fill 100% Black Line
  - Highlighting
  - Labeling
  - Legends
  - Working with Nulls
  - Table Options
  - Annotations and Display Options
- Introduction to Visualization Best Practices

Building Better Dashboards – In the Fundamentals courses, we learned how we can combine several worksheets in a dashboard and publish that to the web. In the Advanced course, we will learn how to build effective and interactive applications via dashboarding.

- Interactive Dashboards
  - Quick Filters
  - Dashboard Objects
  - Filter Actions
  - Highlighting and Actions
  - Performance
  - Publish to Web
  - Zones
- Guided Analytics
  - Cascading Filters
  - Highlighting
  - Quick filter Options
Overview – Working with Tableau Server – In Tableau Fundamentals, we saw that we could use Tableau Server as a mechanism to share our visualizations and dashboards. Now we will dig in a bit deeper.

- Publishing to Tableau Server – Overview of publishing, scheduling & security options
- Tableau Server Usage – Interacting with Published Visualizations

Wrap Up Activities

- Summary of what we have learned
- Advanced activities to pull together and solidify the concepts

Where to get Further Assistance

- The Help File / Product Manual
- Knowledge base
- Forums
- Whitepapers & Books
- Further Training Offerings & Professional Services
- Technical Support