

# Data Day Workshop

Build on the skills you learned in standard training. Add a Data Day Workshop to your private training to:

1. Learn best practices and deep dive on the skills most critical to your team's success.
2. Skip our standard data sets and train on your company's data and Tableau environment.

**STEP 1:** Choose a course from our [Standard Training catalog](#) that aligns with your team's skill level and goals.

**STEP 2:** Build your Data Day by choosing up to 8 hours of the below modules or workshops:

Modules   <i>Modules can use customer data or standard data sets.</i>		Length	Standard Course Pairings		
			Desktop I (Beginner)	Desktop II (Intermediate)	Desktop III (Advanced)
<b>Web Authoring</b>					
1	<a href="#">Tour of Your Tableau Online Environment</a>	1 Hour	X	X	-
2	<a href="#">Authoring in Tableau Online</a>	3 Hours	X	X	X
3	<a href="#">Implementing Row-Level Security</a>	4 Hours	-	X	X
<b>Dashboard Design</b>					
4	<a href="#">Taking Dashboards from Good to Great</a>	6 Hours	X	X	-
<b>Data Curation</b>					
5	<a href="#">Connecting to Additional Data Sources</a>	1 Hour	X	X	-
6	<a href="#">Blending and Choosing a Multi-Table Analysis Strategy</a>	2 Hours	-	X	X
<b>Advanced Analytics</b>					
7	<a href="#">Deep Dive: LODs &amp; Table Calculations</a>	4 Hours	-	X	X
<b>Mapping</b>					
8	<a href="#">Analyzing Geographic Data</a>	3 Hours	-	X	X
<b>Office Hours</b>					
9	Instructor Office Hours	2-4 Hours	X	X	X
<b>Workshops   <i>Workshops cannot use customer data.</i></b>					
10	<a href="#">Workshop: Advanced Analytics Techniques</a>	4 Hours	-	X	X
11	<a href="#">Workshop: Dashboard Performance Optimization</a>	4 Hours	-	X	X

# 1. Tour of Your Tableau Online Environment

## Goal

This module is aimed at users who are new to Tableau Online and want to interact with workbooks and dashboards on their Tableau Online sites.

**Duration: 1 hr**

## Outcomes

At the end of this module , learners will be able to:

- Login to their Tableau Online site.
- Understand common roles and permissions for users on a site.
- Navigate the site to find content.
- Interact with data on the site.
- Create alerts and subscriptions for workbooks.
- Create custom views and metrics for workbooks.

## Data Used

Customer Data

## Outline

- General workflow in context of Tableau Platform
  - Common user roles and how that informs workflow
- Interface and Key Navigation
  - Overview of interface
  - Content navigation
- Consuming and engaging with published data/vizzes/dashboards
  - Create Alerts, custom views, subscriptions, metrics
- **Activity:** Students will explore the UI of Tableau Online; interact with workbooks, and create an alert and subscription on a workbook.

## 2. Authoring in Tableau Online

### Goal

This module is aimed at beginners or Tableau Desktop users who want to author and publish views on Tableau Online.

**Duration: 2-3 hrs**

### Outcomes

At the end of this module, students will be able to:

- Connect to data on Tableau Online.
- Create views in Tableau Online.
- Create custom views.
- Describe the project structure on a site.
- Understand permissions for publishing to projects

### Data Used

Customer Data

### Outline

- Publish a data source using Creator permissions.
- Connect to a data source using Explorer (can publish) permissions.
- Create and edit views in Tableau Online.
- Understand the project structure and permissions on a site.
- **Activity:** Students will create and save views in Tableau Online.

## 3. Implementing Row-level Security

### Goal

This module is aimed at intermediate-level users who want to understand and implement row-level security for their data using Tableau.

**Duration: 4 hrs**

### Outcomes

At the end of this module, learners will be able to:

- Get a deeper understanding of how row-level security is implemented.
- Understand row-level security best practices for data sources and workbooks.

### Data Used

Customer Data

### Outline

- Overview of Row-Level Security Options in Tableau
- Create a user filter and map users to values manually
- Create a dynamic user filter using a security field in the data
- Use a data policy
- Use existing RLS in the database
- RLS Best Practices for Data Sources and Workbooks

## 4. Taking Dashboards from Good to Great

### Goal

This module is aimed at intermediate-level users who want to learn how to design and create informative and visually appealing dashboards.

**Duration: 6 hrs**

### Outcomes

At the end of this module, learners will be able to:

- Describe what makes a poor dashboard.
- Understand best practices for selecting colors, and apply custom color palettes for their dashboards.
- Format a dashboard using various layout techniques, show/hide containers, white spaces, and custom shapes.
- Fine tune a dashboard using tooltips, instructions, and notes.

### Data Used

Customer Data

### Outline

- Anatomy of a poorly designed dashboard
  - Why are the design choices inefficient or misleading to users?
  - How can we improve them?
- Importance of Visual Analytics
  - Viz Selection & Scenarios
    - Charts for viewing specific values
    - Charts for comparing and ranking categories
    - Charts for comparing parts to a whole
    - Charts for Comparing Measures
    - Charts for viewing data over time
  - What is Visual Analytics and why does it matter?
    - Informing without misleading
    - Visual area assumptions
    - Axis assumptions
    - Color assumptions
    - Amount of detail
  - Color best practices
    - Design for Accessibility

- Company Color Palettes
- **Activity:** Students will all load in custom color palettes together (if time)
- Formatting
  - Layout Techniques
  - Show/Hide Containers
  - Dashboard Navigation
  - White spaces and fonts
  - Custom shapes for info icons
  - **Activity:** Coffee Chain Analysis from dashboarding practice
    - Adding White spaces
    - Show/Hide containers
    - Custom shapes
- Fine Tuning
  - Polishing Tooltips
  - Providing Notes and Instructions
  - Tips and Tricks
- Dashboard interactivity
  - Parameters
  - Reference Lines
  - Dynamic measures
  - **Demo:** Sheet Swaps
  - Parameter Actions
  - **Demo:** Reference Lines
  - Asymmetric Drill Downs
  - Show/Hide Containers for sheet swapping
  - Viz in tooltip
  - **Activity:** Students add interactivity to dashboards using parameters, parameter actions, and create viz in tooltips.

## 5. Connecting to Additional Data Sources

### Goal

This module is aimed at intermediate-level users who want to learn how to connect to various types of data sources.

**Duration: 1 hr**

### Outcomes

At the end of this module, learners will be able to:

- Connect to flat files such as csv, excel, and text.
- Connect to additional data connectors.
- Connect to data on Tableau Server.

### Data Used

Customer Data

### Outline

- Connecting to flat files (CSV, Excel, text)
- What can you do with published data sources?
- Connecting to Snowflake
- Connecting to data on Tableau Server
- **DEMO** using instructor's version of Tableau Online (identical except login process)
- Finding and identifying data sources when logged into Tableau Server
- **DEMO** using instructor's version of Tableau Online (identical except login process)

## 6. Blending and Choosing a Multi-Table Analysis Strategy

### Goal

This module is aimed at intermediate-level users who want in-depth knowledge about using multiple tables as their data source.

**Duration: 2 hrs**

### Outcomes

At the end of this module, learners will be able to:

- Describe the use cases for blends.
- Describe how blends work.
- Describe the concept of logical layer and physical layer.
- Distinguish between blends, joins, and relationships.

### Data Used

Customer Data

### Outline

- Introduce blending for Explorers and Creators: Why use it?
- How blends work, how to set up blends,
- Re-orient ourselves with areas for multi-table analysis: logical layer, physical layer, sheet-level
- How do I choose?
  - Identifying differences between joins and blends
  - Identifying differences between blends and relationships
- **Activity:** Students will create a blend using multiple data sources.



## 7. Deep Dive: LODs and Table Calculations

### Goal

This module is aimed at intermediate-level users who want to use LODs and Table calculations for complex analysis.

**Duration: 4 hrs**

### Outcomes

At the end of this module, learners will be able to:

- Use LODs for advanced analysis.
- Use Custom Table calculations for advanced calculations.

### Data Used

Customer Data

### Outline

#### Table Calculations

- Writing Table Calculations
- Customizing Table Calculations
- Nested Table Calculations
- Filtering with Table Calculations

#### LODs

- INCLUDE and EXCLUDE LODs
- Nested Level-of-Detail (LOD) Expressions
- Level-of-Detail (LOD) Filtering Order
- Level-of-Detail (LOD) Limitation

## 8. Analyzing Geographic Data

### Goal

This module provides a deeper dive into spatial analysis and best practices for creating maps.

**Duration: 3 hrs**

### Outcomes

At the end of this module, learners will be able to:

- Format maps.
- How to use color, legends, and other best practices for creating maps.
- Create choropleth and WWS maps.
- Understand the tips and tricks for creating maps.

### Data Used

Customer Data

### Outline

- Formatting Your Maps
  - Helpful Spatial Files + Joins
- Deep Dive: Labeling Maps for Reporting
  - Color Best Practices
  - Legends
  - Dual Axis/Map Layers
- Saving as an Image/PDF/PPT
- Advanced Demos
  - Bivariate Choropleth Mapping
  - Custom WMS Maps
- Tips + Tricks

## 10. [Workshop: Advanced Analytics Techniques](#)

### Goal

This workshop is aimed at students who want to learn advanced analysis techniques using Tableau.

**Note:** For successful completion of this workshop, you will need the starter and solution files provided for the workshop. Using customer data may not work for the problems you are trying to solve with this workshop.

### Duration: 4 hrs

### Outcomes

At the end of this workshop, learners will be able to:

- Use clustering, sets, set actions, and groups for segmentation and cohort analysis.
- Use advanced calculation features such as calculations, LODs, and Table calculations to address common business use cases.
- Use parameters for What If and scenario analysis.
- Perform time series and predictive analysis.

### Data Used

Tableau Data (Workbooks for specific scenarios; May not be able to recreate with customer data)

### Outline

The course outline below provides an overview of the lecture and lab for each module. The lab storyline is that the student works in the Data Analytics department of a large retail chain. During their day, the student is asked to perform various advanced analytics tasks to meet the needs of their customers.

#### Module 1: Data Segmentation and Cohort Analysis

- Clustering
- Sets and Set Actions (Dynamic sets, combined sets)
- Advanced calculations

#### Module 2: Advanced Analysis using Calculations

- LODs
  - How LODs work: Fixed, Include, Exclude

- What are their uses – use case
- How to use LODs
- Table calculations
  - What are Table calculations
    - What are its uses – use cases
  - What are Secondary Table calculations
    - What are its uses – use cases
    - How to apply a secondary table calculation

### **Module 3: What-If Scenario Analysis**

- Parameters
  - What are parameters?
  - Parameters vs. calculated fields.
  - What are their practical uses – use case.
  - How to work with parameter actions.

### **Module 4: Time Series and Predictive Analysis**

- Time series analysis
  - What is time series analysis?
  - What are its uses – use case.
  - How to monitor data over time using time series analysis.
- Forecasting
  - How does forecasting work in Tableau?
  - What are its uses – use case.
- How to create a forecast in Tableau. Predictive Analysis
  - How does predictive analytics work in Tableau?
  - What are its uses – use case.
  - How to create a predictive model in Tableau.

**Activity:** Each module will have a hands-on component where the student will use calculations to solve business problems.

# 11. [Workshop: Dashboard Performance Optimization](#)

## Goal

This workshop describes how to identify the reasons for a poorly performing dashboard, and strategies to help improve the performance of the dashboard.

**Note:** For successful completion of this workshop, you will need the starter and solution files provided for the workshop. Using customer data may not work for the problems you are trying to solve with this workshop.

**Duration:** 4 hrs

## Outcomes:

- Identify common performance problems.
- Learn the best practices and strategy to improve efficiency and avoid issues.
- Apply the lessons learned to hands-on activities.

## Data Used

Tableau Data (workbooks created for performance issues; may or not be able to recreate with customer data)

## Outline

- Checking for dashboard performance
  - Tools used such as Performance Recorder, Tableau Log Viewer
- What slows down dashboard performance?
  - Review the key elements that affect workbook performance: design elements, calculations, queries, data connections, data sources, Desktop vs. Server, hardware
- Strategies and best practices for improving dashboard performance, including (not limited to)
  - Data strategy
  - Design strategy
  - Use of filters
  - Use of calculations
- **Activity:** Case study where multiple strategies are used to optimize the performance of dashboards (could be different scenarios/workbooks for different activities).