Tableau

Nature of the Course: Theory + Practical
Total Hours per Day: 2 Hours
Course Duration: 3 Weeks

Course Summary

Tableau is a widely used business intelligence (BI) and analytics software that is used by firms such as Amazon, Experian, and Unilever to explore, analyze, and securely share data via Workbooks and Dashboards. Everyone can use it because of its user-friendly drag-and-drop feature to swiftly clean, analyze, and visualize your team's data. You'll learn how to use Tableau's interface, as well as how to link and show data using simple visualizations. You'll have the skills you need to comfortably explore Tableau and create effective data dashboards at the end of this session.

Completion Criteria

After fulfilling all of the following criteria, the student will be deemed to have finished the module:

1. Has attended 90% of all classes held.
2. Has received an average grade of 80% on all assignments
3. Has received an average of 60% in all assessments.
4. The tutor believes the student has grasped all of the concepts and is ready to go on to the next module.

Required Text Books

1. Alexander Loth, "Visual Analytics with Tableau" Wiley.
2. Ryan Sleeper, "Practical Tableau", O'Reilly Media.
3. Molly Monsey and Paul Sochan, "Tableau for Dummies", Wiley.

Prerequisites

- There is no prior educational level requirement for this course.

- If you are only interested in theory and have no interest/patience in spending at least 10 hours every week throughout the duration of the course, then this course might not be for you.

- If you have absolutely no idea about programming or do not see yourself doing programming in the next six -odd months, then this class may not be for you.

Course Details

WEEK 1

GETTING STARTED
- The Tableau Interface
- Distributing and Publishing

TABLEAU PREPARATION
- Getting Started with Tableau Prep Builder
- The Tableau Prep Builder Interface
- The Input Step
- The Cleaning Step
- Group and Replace
- The Profile pane
- The Pivot Step
- The Aggregate Step
- The Join Step
- The Union Step
- The Output Step
- Tableau Prep Conductor

CONNECTING TO DATA
- Getting Started with Data
- Managing Metadata
- Managing Extracts
- Saving and Publishing Data Sources
- Data Prep with Text and Excel Files
- Join Types with Union
- Cross-Database Joins
- Data Blending
- Additional Data Blending Topics
- Connecting to PDFs
- Connecting to Cubes

VISUAL ANALYTICS
- Getting Started with Visual Analytics
- Drill Down and Hierarchies
- Sorting
- Grouping

- Additional Ways to Group Data
- Creating Sets
- Working with Sets
- Set Actions
- Ways to Filter
- Using the Filter Shelf
- Interactive Filters
- Where Tableau Filters
- Additional Filtering Topics
- Parameters
- Parameter Actions
- Formatting
- The Formatting Pane
- Basic Tooltips
- Viz in Tooltip
- Trend Lines
- Reference Lines
- Forecasting
- Clustering
- Analysis with Cubes and MDX

WEEK 2
DASHBOARDS AND STORIES

- Getting Started with Dashboards and Stories
- Building a Dashboard
- Dashboard Objects
- Dashboard Formatting
- Dashboard Interactivity using Actions
- Dashboard Extensions
- Device Designer
- Story Points

MAPPING

- Getting Started with Mapping
- Maps in Tableau
- Editing Unrecognized Locations
- Spatial Files

- The Destiny Mark Type (Heat Maps)
- Expanding Tableau's Mapping Capabilities
- Custom Geocoding
- Polygon Maps
- Map Box Integrations
- WMS: Web Mapping Services
- Background Images

CALCULATIONS

- Getting Started with Calculations
- Calculation Syntax
- Intro to Table Calculations
- Modifying Table Calculations
- Introduction to LOD Expressions
- Aggregate Calculations
- Date Calculations
- Logic Calculations
- String Calculations
- Number Calculations
- Type Calculations
- Conceptual Topics with LOD Expressions
- Aggregation and Replication with LOD Expressions
- Nested LOD Expressions
- How to Integrate R and Tableau
- Using R within Tableau

WEEK 3
WHY IS TABLEAU DOING THAT?

- Understanding Pill Types
- Measuring Names and Values
- Aggregation, Granularity and Ratio Calculations
- When to Blend and When to Join
- Filtering for Top Across Panes

HOW TO

- Using a Parameter to Change Fields
- Finding the Second Purchase Date with LOD Expressions
- Cleaning Data by Bulk Re-Aliasing

- Bollinger Bands
- Bump Charts
- Control Charts
- Funnel Charts
- Step and Jump Lines
- Pareto Charts
- Waterfall Charts

PUBLISHING TO TABLEAU ONLINE

- Publishing to Tableau Online
- Device Designer
- Introduction to the Tableau JavaScript API
- Publishing to Tableau Server

LABS

Lab assignments will focus on the practice and mastery of contents covered in the lectures; and introduce critical and fundamental problem-solving techniques to the students.

Learning Outcomes

- Connecting to a variety of data sources and cleaning up the information.
- Combining several datasets.
- Data visualization takes the form of charts, graphs, maps, plots, and so on.
- Tips and tricks for using statistics to tell a clear and effective tale.
- Drilldowns, sorting, grouping, and set and cluster creations are all examples of visual analytics.
- Data filtering, parameters, tooltips, annotations, and reference lines are all available.
- Developing or changing your career path in the field of data science and analytics.
- Making a dashboard out of your report.
- Calculations such as aggregate calculations, date, logical, string, number, and other sorts of calculations can be written in a very complicated and powerful way.