

Course Title: Data Analysis with Tableau

Duration: 4 Weeks

Session Length: 1.5 hours each

Week 1: Introduction to Data Analysis and Tableau

- **Session 1: Understanding Data Analysis**
 - **Objective:** Familiarize yourself with the fundamentals of data analysis and its importance.
 - **Topics:**
 - What is data analysis? Definitions and key concepts
 - The data analysis process: from data collection to insights
 - The role of data visualization in analysis
 - **Activities:**
 - Group discussion on personal experiences with data
 - Identify potential data analysis projects relevant to your work
 - **Session 2: Getting Started with Tableau**
 - **Objective:** Learn the basics of Tableau and its interface.
 - **Topics:**
 - Overview of Tableau and its features
 - Installing Tableau and exploring the interface
 - Connecting to data sources (Excel, CSV, databases)
 - **Activities:**
 - Hands-on exercise: Connect to a sample dataset in Tableau
 - Explore the different components of the Tableau workspace
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Week 2: Data Preparation and Visualization Basics

- **Session 3: Data Preparation in Tableau**
 - **Objective:** Understand how to prepare data for analysis in Tableau.

- o **Topics:**
 - Cleaning and transforming data in Tableau
 - Creating calculated fields and parameters
 - Understanding data types and aggregations
 - o **Activities:**
 - Hands-on exercise: Clean and transform a sample dataset
 - Group discussion on data preparation challenges
 - **Session 4: Creating Basic Visualizations**
 - o **Objective:** Learn to create basic visualizations in Tableau.
 - o **Topics:**
 - Types of visualizations: bar charts, line charts, and scatter plots
 - Using dimensions and measures effectively
 - Building your first dashboard
 - o **Activities:**
 - Create a set of basic visualizations using your prepared dataset
 - Share your visualizations with a partner for feedback
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Week 3: Advanced Visualization Techniques

- **Session 5: Enhancing Your Visualizations**
 - o **Objective:** Explore advanced visualization techniques to enhance your data storytelling.
 - o **Topics:**
 - Using color, size, and labels effectively
 - Creating maps and geographic visualizations
 - Incorporating reference lines and bands
 - o **Activities:**
 - Hands-on exercise: Create advanced visualizations with your dataset

- Peer review of visualizations focusing on design principles

- **Session 6: Building Interactive Dashboards**

- **Objective:** Learn to create interactive dashboards that engage users.
- **Topics:**
 - Combining multiple visualizations into a dashboard
 - Adding interactivity with filters, actions, and parameters
 - Best practices for dashboard design
- **Activities:**
 - Build an interactive dashboard using your visualizations
 - Present your dashboard to the class and gather feedback

Week 4: Data Analysis and Storytelling

- **Session 7: Analyzing Data and Drawing Insights**

- **Objective:** Develop skills to analyze data and extract meaningful insights.
- **Topics:**
 - Identifying trends, patterns, and outliers in data
 - Using Tableau's analytics features (trend lines, forecasts)
 - Interpreting results and drawing conclusions
- **Activities:**
 - Hands-on analysis of a dataset to identify key insights
 - Group discussion on data interpretation and decision-making

- **Session 8: Presenting Your Findings**

- **Objective:** Learn how to effectively present your analysis and insights.
- **Topics:**
 - Crafting a data story: structuring your presentation
 - Best practices for presenting data visualizations
 - Handling questions and feedback during presentations

o **Activities:**

- Prepare a short presentation of your analysis and dashboard
 - Present to the class and receive constructive feedback
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Course Conclusion

- **Wrap-Up:** Review key concepts and skills learned throughout the course. Discuss resources for further learning and application of Tableau in your work.
- **Feedback Session:** Gather feedback on the course for continuous improvement.