Data Visualization and Storytelling Using

Duration: 4-day

Training Overview

This 4-day hands-on program equips participants with the skills to visualize, interpret, and communicate data-driven insights effectively using Excel and Microsoft Power BI. Participants will learn to design impactful charts, dashboards, and stories that engage stakeholders and support strategic decision-making.

Training Objectives

By the end of the program, participants will be able to:

- **Understand the principles of data visualization and storytelling.**

- **Use Excel's advanced visualization tools to communicate insights clearly.**

- **Build dynamic, interactive dashboards in Excel and Power BI.**

- **Connect, clean, and model data efficiently for visualization.**

- **Design Power BI reports and dashboards that tell a clear business story.**

- **Apply visualization best practices for clarity, simplicity, and impact.**

Day 1: Foundations of Data Visualization and Storytelling

Key Topics

- **Understanding data visualization and its importance in decision-making**

- **Principles of effective visual communication (clarity, focus, simplicity)**

- **Data storytelling framework – from data to insight to narrative**

- **Choosing the right chart types for different data and audiences**

- **Common visualization mistakes and how to avoid them**

- **Storyboarding your data story – setting context and flow**

Practical Activities

- **Case examples: Good vs. poor visualizations**

- **Exercise: Match data types to appropriate chart types**

- **Hands-on: Create clean, professional charts in Excel using sample datasets**

Day 2: Advanced Data Visualization Techniques in Excel

Key Topics

- **Working with large datasets and structured tables in Excel**

- **Creating advanced charts: combination charts, waterfall, Pareto, Gantt, and dynamic visuals**

- **Using conditional formatting for storytelling and data emphasis**

- **Building interactive dashboards using slicers, timelines, and form controls**

- **Data cleaning and preparation with Power Query for visualization**

- **Automating data refresh and chart updates**

Practical Activities

- **Hands-on: Build a performance dashboard using Excel charts and slicers**

- **Exercise: Transform and visualize business data using Power Query**

- **Mini-project: Create a KPI dashboard with trend and variance visuals**

Day 3: Power BI Fundamentals and Data Modeling for Visualization

Key Topics

- **Introduction to Power BI and its ecosystem**

- **Understanding Power BI Desktop, Service, and Mobile**

- **Connecting to various data sources (Excel, SQL, Web, etc.)**

- **Data cleaning and transformation using Power Query Editor**

- **Designing effective data models – relationships, hierarchies, and measures**

- **Creating calculated columns and measures using DAX (Data Analysis Expressions)**

Practical Activities

- **Hands-on: Import and clean data in Power BI**

- **Exercise: Create relationships between datasets and build basic KPIs**

- **Mini-project: Develop a small data model ready for visualization**

Day 4: Storytelling and Dashboard Design in Power BI

Key Topics

- **Dashboard design principles and layout strategies**

- **Creating visual narratives using Power BI visuals (cards, maps, matrix, etc.)**

- **Using filters, slicers, and bookmarks for interactivity**

- **Designing executive dashboards and performance reports**

- **Publishing, sharing, and collaborating in Power BI Service**

- **Storytelling techniques – guiding users through data insights**

- **Best practices for visual consistency, color theory, and accessibility**

Practical Activities

- **Hands-on: Build a complete Power BI dashboard with interactive elements**

- **Exercise: Add storytelling components with titles, annotations, and tooltips**

- **Final Project: Develop and present a business story using a Power BI report**