

Data Visualization- 12 Hours

Course description

Data visualization is one of the most powerful ways to analyze, understand, and communicate data-driven insights. However, designing effective data visualizations requires a combination of analytical thinking, statistical understanding, and visual design skills. This course provides a comprehensive introduction to the principles, history, and best practices of data visualization. Rather than focusing on a specific tool, the course is tool-agnostic and teaches foundational concepts applicable across all reporting and visualization platforms such as Power BI, Tableau, Qlik, Excel, and others. Participants are exposed to numerous real-world examples of charts, reports, and dashboards, learning how to choose the right visualization for both the data and the message. The emphasis is on practical techniques grounded in human visual perception and proven data visualization principles.

What Participants Gain?

- Understanding core principles of human visual perception for effective data visualization
- Selecting the right chart types for different data structures and business messages
- Designing clear, persuasive business dashboards and KPI-driven views
- Applying visual best practices (color, layout, emphasis) to improve clarity and impact
- Avoiding common visualization pitfalls and misleading charts
- Creating consistent, tool-agnostic visual standards across BI platforms

Target Audience

- Data Analysts
- BI Professionals
- Data Scientists
- Anyone working with data who wants to present insights clearly and effectively
- Managers who consume dashboards, reports, and presentations and want to improve clarity and impact

Prerequisites

- Experience working with data
- Understanding of basic analytical concepts
- Experience building or consuming dashboards and reports

Course Contents:

- Introduction to Data Visualization
 - Core components of data visualization
 - Visual elements and their roles
 - Visual perception vs. verbal perception
 - Use cases: Data Journalism, Data Art
 - Data storytelling and narrative
- History of Data Visualization
 - Visualizations that influenced major historical decisions
 - Evolution of the data visualization field
 - Key schools of thought
 - Influential figures and literature review
- Practical Visualization Techniques
 - Color muting
 - Creating focal points
 - Data-ink ratio
 - Split views and small multiples
 - Additional applied techniques
- Gestalt Principles of Visual Perception
- Choosing Effective Visualizations
 - Data types
 - Chart types and best practices
 - Common visualization pitfalls and how to avoid them
 - Matching chart types to data and message
- Colour Theory in Data Visualization
 - Properties of color
 - Best practices for using color effectively
- Dashboards
 - Types of dashboards
 - Dashboard planning
 - Interactive elements
 - Dashboard layout and design