

Visual Data Analysis Techniques (1 Day)

Description:

Many view data visualization simply as a means for displaying information. However, visualizing data is a key part of exploring, transforming, and analyzing data to build actionable information. It is also a key part of displaying information when presenting solutions. **Research shows people make sense of visual information more quickly (than tabular data or narratives).** This fact is true for your audience, but also for you as well.

Participants in this course will be taught several visual analysis techniques. They will be given real data sets and a chance to build skill using these techniques. They will learn to identify trends and patterns in the data and use this information to determine the cause of problems or make predictions about future results. They will learn best practices for showing information visually to their audience.

Participants will be taught to think critically about visuals. They will be able to evaluate visuals created by others and identify strengths and weaknesses in their work. They will learn how to use this evaluation to refine visuals so they can be easily consumed by their audience.

This course is intended for anyone who needs to analyze data as part of their job. Having a basic understanding of statistical and analytical techniques is helpful, but not required.

By default, many of the activities are administered using MS Excel because of its vast availability. However, additional tools such as Tableau and Power BI can be included upon request.

Objectives:

Upon completion of the Visual Data Analysis Techniques course, participants will be able to:

- Explain how visualizing data helps in the analysis and understanding of complex data
- Describe and employ several types of visual analysis techniques including Time-Series, Deviation, Distribution and Correlation analysis
- Describe why a visual analysis of data is a necessary step and why statistical analysis isn't sufficient on its own
- Explain the strengths and weaknesses of different visual types such as line graphs, bar charts, tree maps, waterfalls, histograms, and scatterplots
- Analyze business data to identify trends, patters, proportions, and comparisons
- Predict future trends based on previous results
- Describe how geospatial visualizations can be used to simplify enormous amounts of GIS data.
- Practice reading and interpreting charts and assess the use of chart types
- Apply critical thinking and problem solving to visualization work