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ICT-TEX course on Digital skills

Topic 10: Business Analytics

The course is developed under Erasmus+ Program Key Action 2:
Cooperation for innovation and the exchange of good practices [Knowledge Alliance](#)

ICT IN TEXTILE AND CLOTHING HIGHER EDUCATION AND BUSINESS

Project Nr. 612248-EPP-1-2019-1-BG-EPPKA2-KA

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10.4. Data Visualizations and Analytics



These slides are part of the topic on
“Topic 10: Business Analytics” of the course on
Digital skills in Textile and clothing industry.

Check also the other themes in this topic:

- 10.1. Analytics and Classification of Analytics
- 10.2. Business Analytics
- 10.3. Big Data and Analytics
- 10.5. Popular Analytics Software tools



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Data Visualizations

- Visualization represents a human cognitive activity.
- To Visualize is to form a mental model or mental image of an object or phenomenon.
- At the center of modern business analytics is the data visualization
- Analytics tools use various data visualizations to present and visualize data to the users.



Data Visualizations

- Definition of Data Visualization

“Data visualization is the process of displaying data (often in large quantities) in a meaningful fashion to provide insights that will support better decisions.”

- Bahga, A., Madiseti, V.: *Big Data Science & Analytics: A Hands-On Approach. 1st Edition*, Arshdeep Bahga & Vijay Madiseti 2019. ISBN: 978-1-949978-00-1 (2019)



Analytics Data Visualizations

- Analytics tools provide insights and visualize this information with the help of data visualizations.
- The Data Visualizations present the insights in an easy-to-understand format for the business stakeholders such as managers, business executives, staff, clients, and so on.
- Visualizations present different views of the observed data.
- Present relationships, connections, changes, timeframes, compositions, and so on.



Analytics Data Visualizations

- Analytics data visualizations provide an easy way to visually analyze processed data, spot patterns in data, and extract insights from data that can't be easily spotted by people, and help make better business decisions.
- Analytics uses a variety of metaphors and symbols for data visualization.



Data Visualization Examples

General Types of Data Visualizations

- Dashboards
- Tables
- Charts
- Infographics
- Graphs
- Maps
- Others



Data Visualization Examples

Various metaphors and methods for Data Visualizations

Heat Map

Matrix

Bullet Graph

Box-and-whisker Plots

Circle View

Histogram

Highlight Table

Line Chart

Bar Chart

Area Chart

Scatter Chart

Gantt Chart

Bubble Cloud

Dot Distribution Map



Data Visualization Examples

Various metaphors and methods for Data Visualizations

Cartogram

Network

Timeline

Wedge Stacked Graph

Streamgraph

Bullet Graph

Scatter Plot (2D or 3D)

Word Cloud

Indicators

Radial Tree

Pivot Table

Text Tables

Interactive maps

Combinations and so on

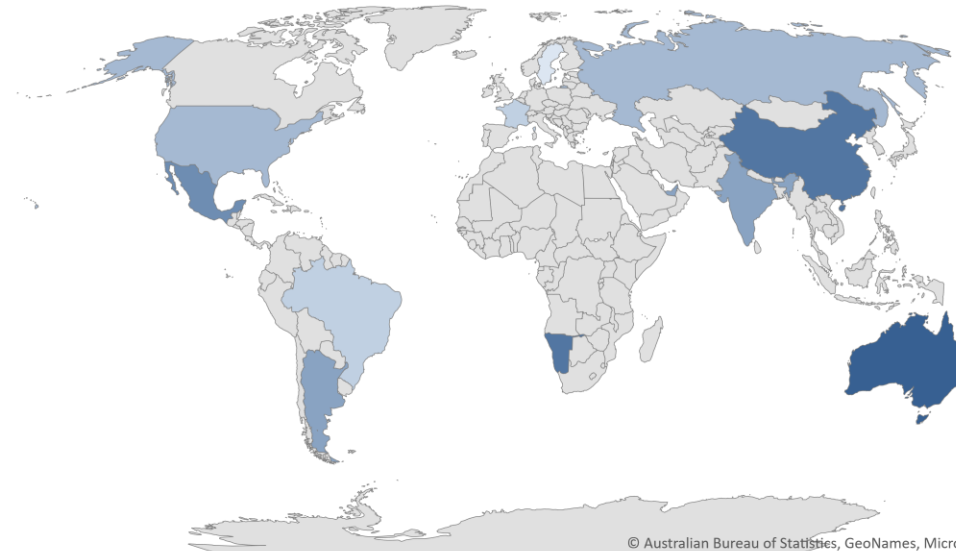


Data Visualization Examples

Heat Map

Chart Title

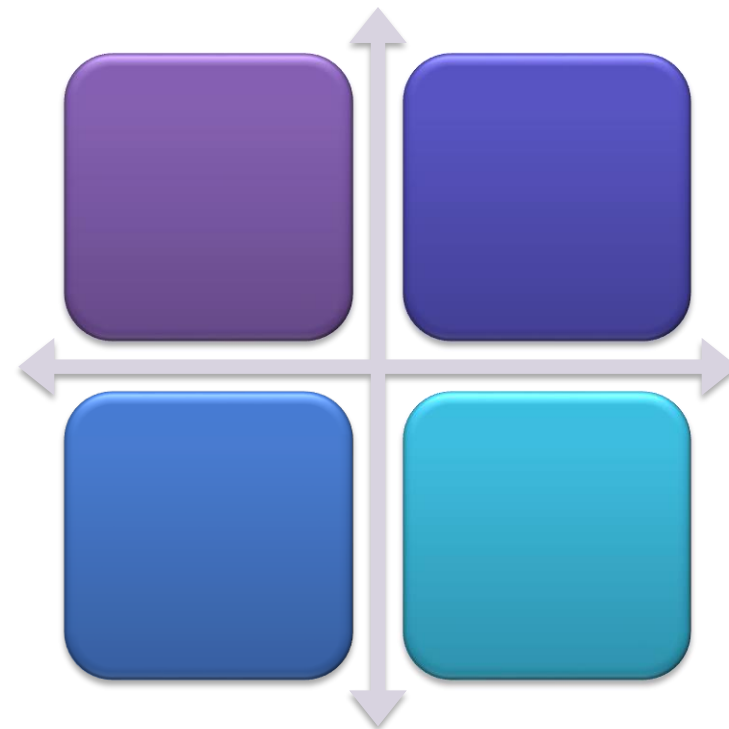
Series1 
6 12





Data Visualization Examples

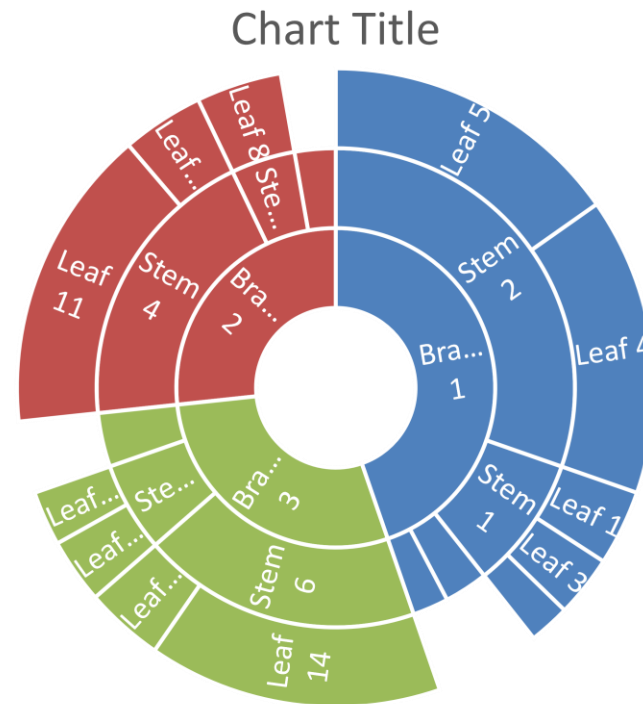
Matrix





Data Visualization Examples

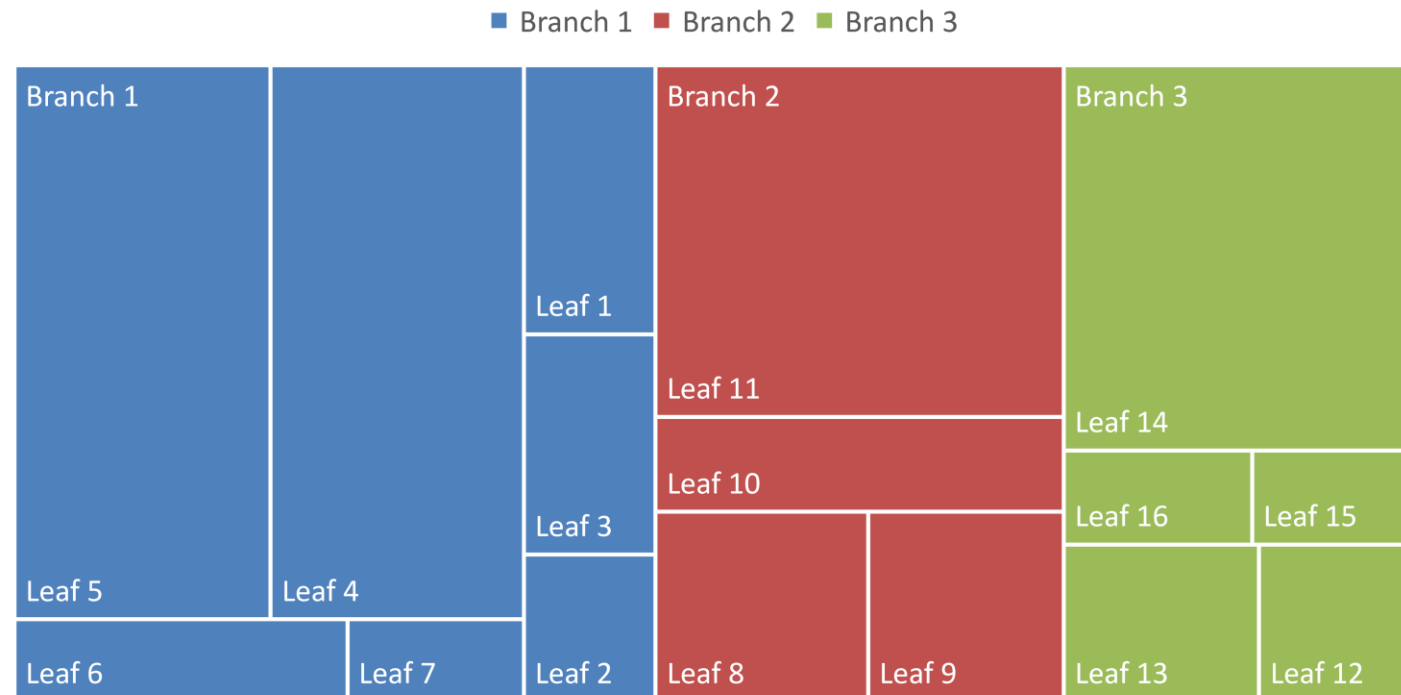
Sunburst





Data Visualization Examples

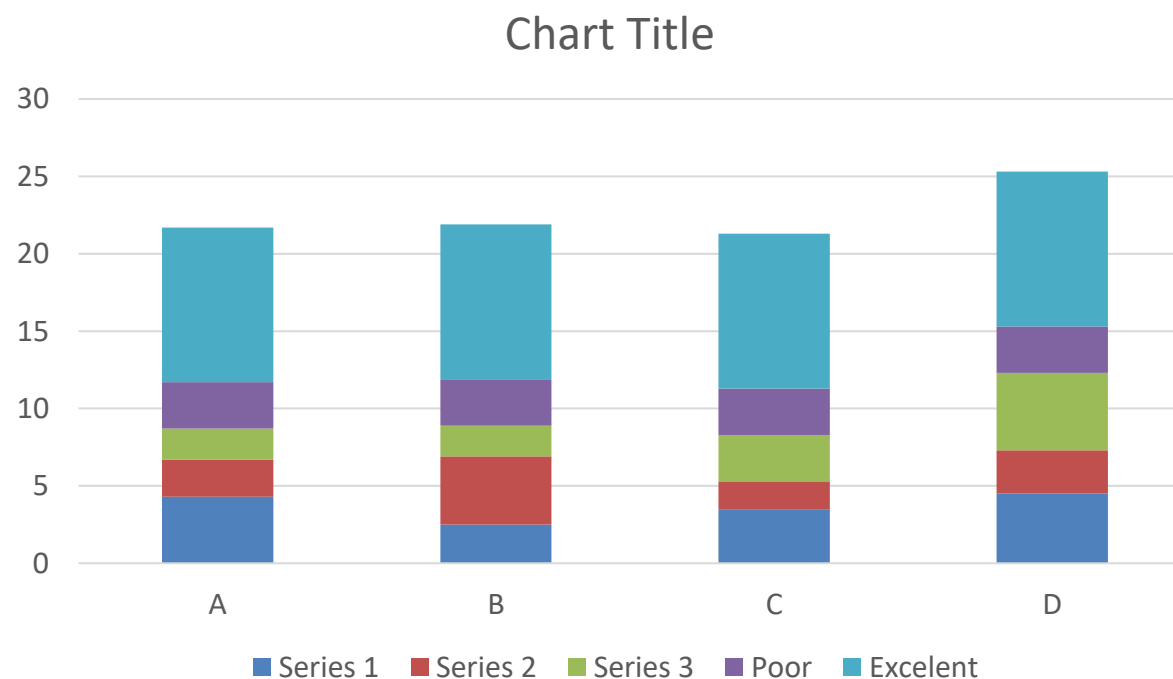
Treemap





Data Visualization Examples

Bullet Graph

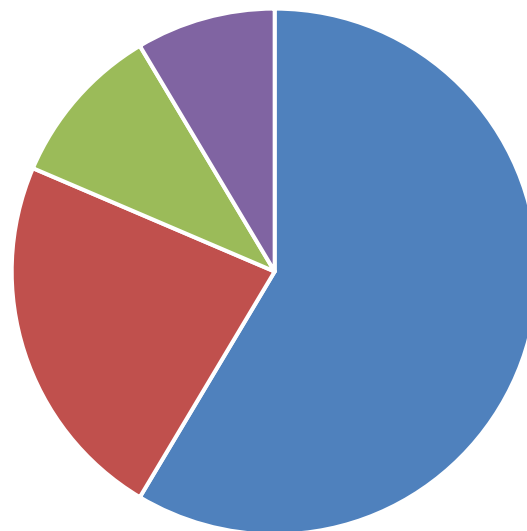




Data Visualization Examples

Pie

Sales



■ 1st Qtr ■ 2nd Qtr ■ 3rd Qtr ■ 4th Qtr

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Data Visualization Examples

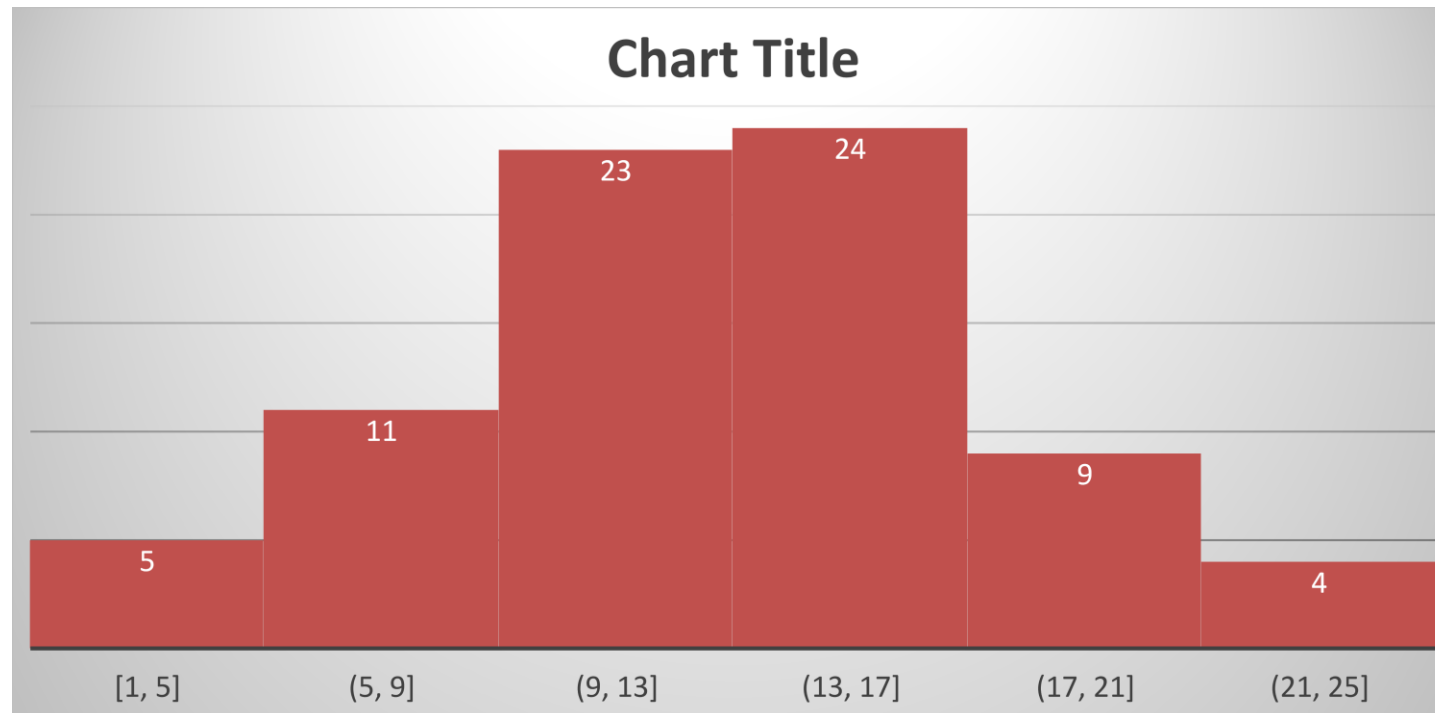
3D - Pie





Data Visualization Examples

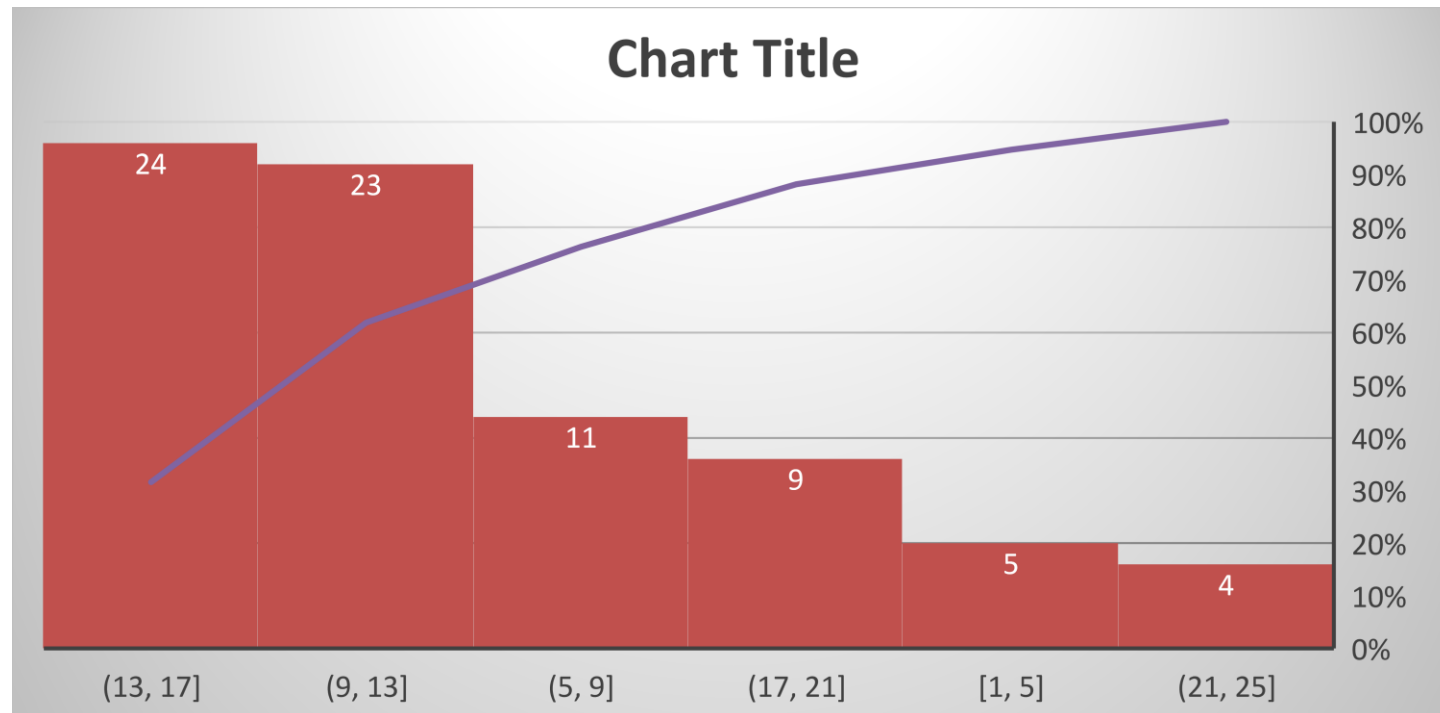
Histogram





Data Visualization Examples

Pareto





Data Visualization Examples

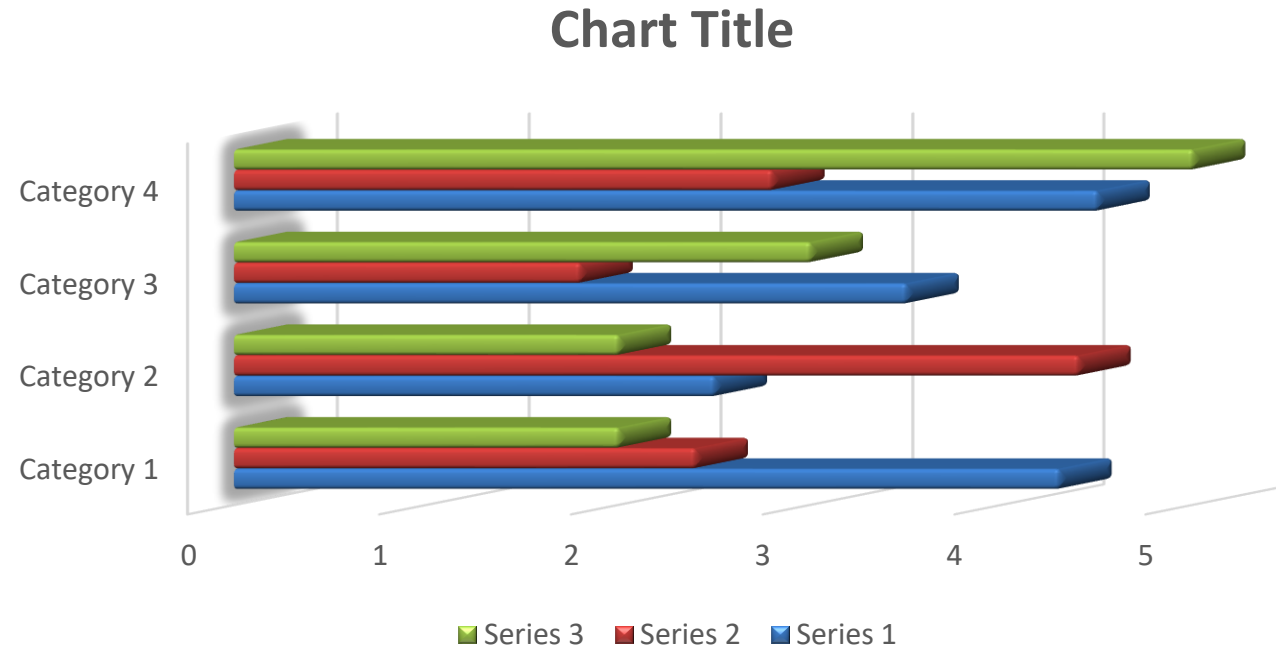
Clustered Bar





Data Visualization Examples

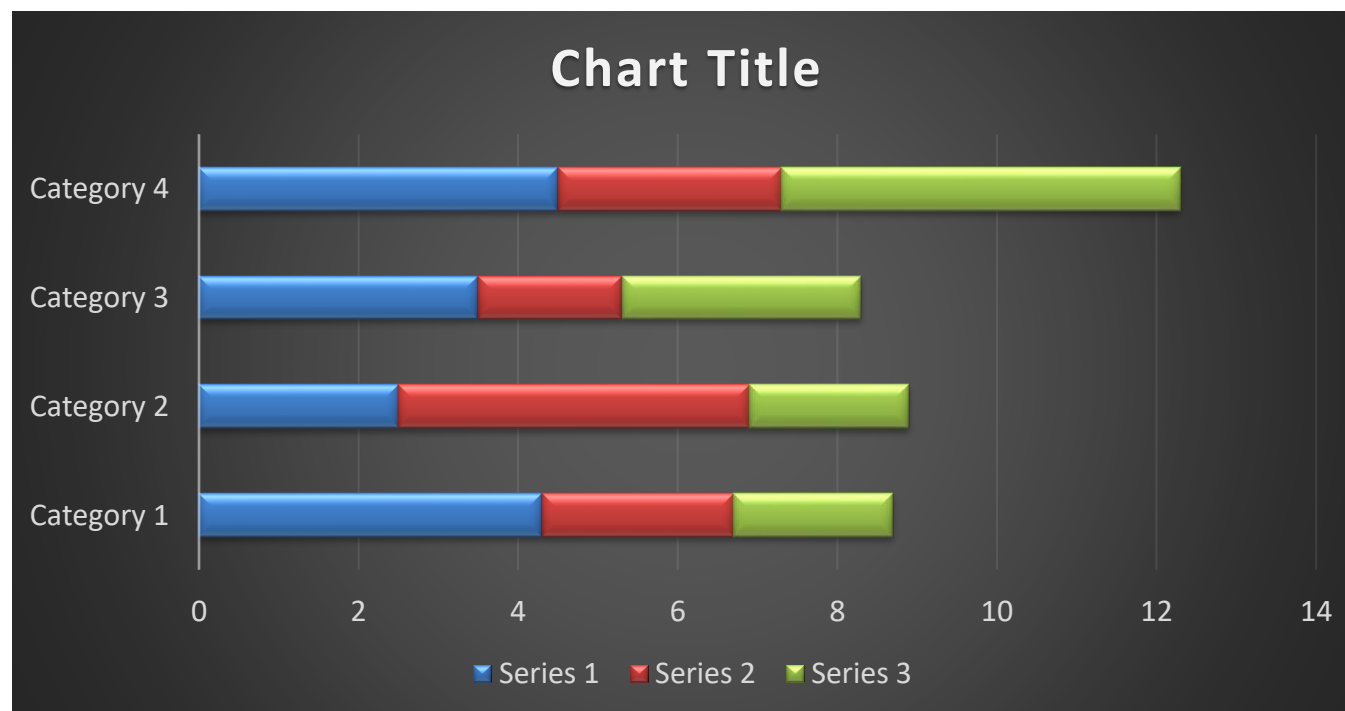
3-D Clustered Bar





Data Visualization Examples

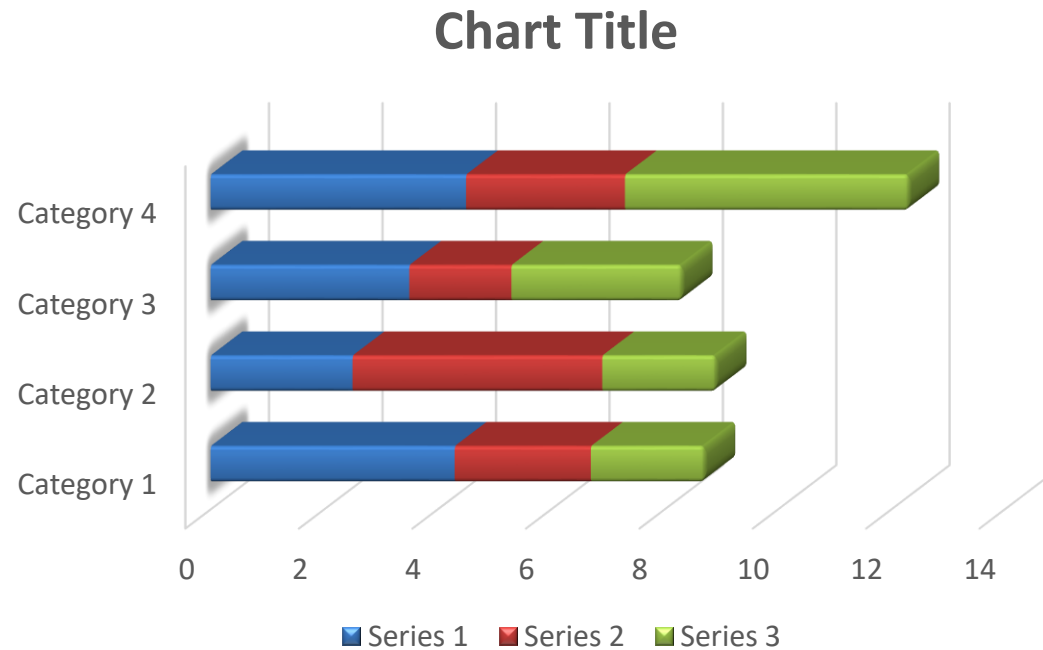
Stacked Bar





Data Visualization Examples

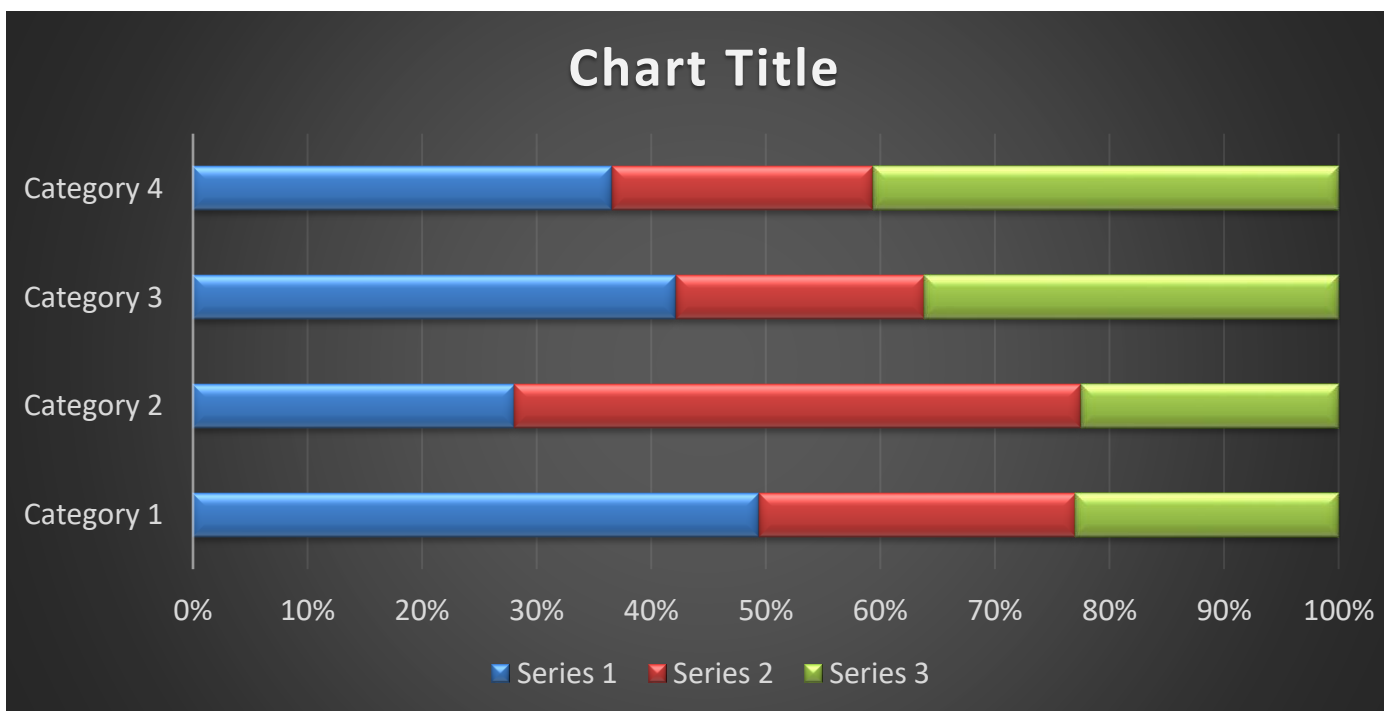
3-D Stacked Bar





Data Visualization Examples

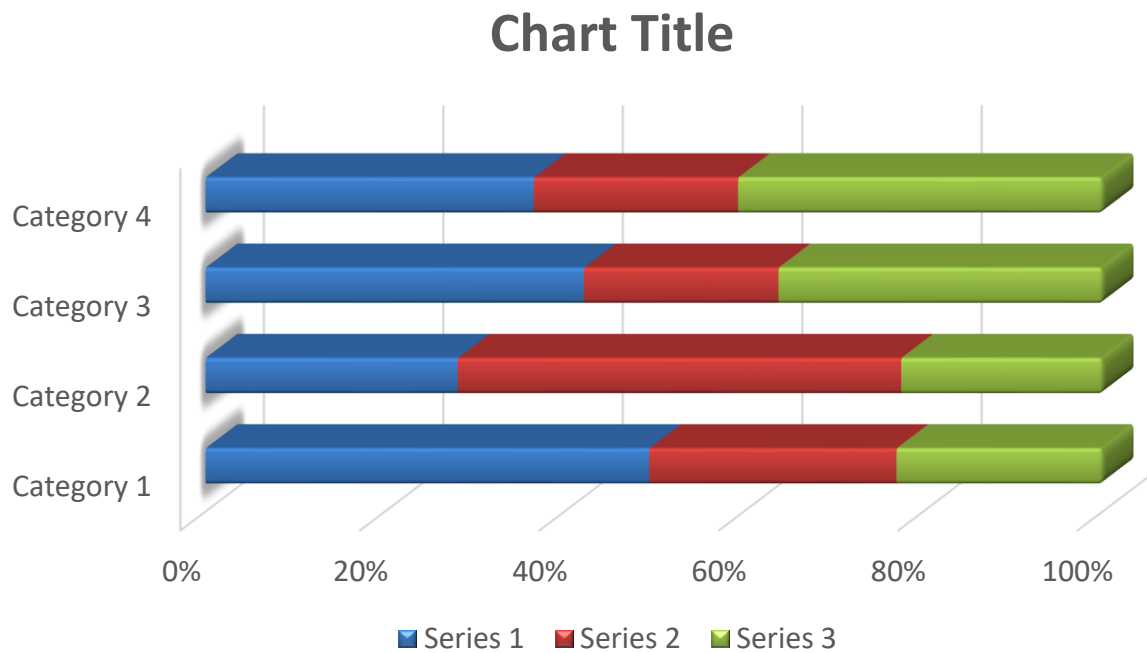
100% Stacked Bar





Data Visualization Examples

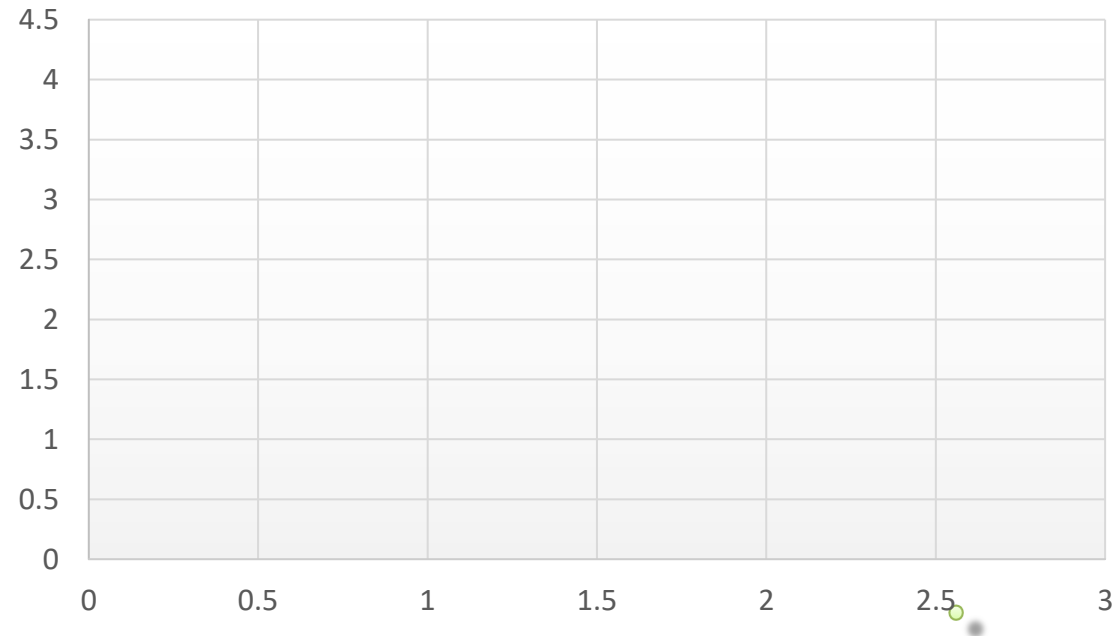
3-D 100% Stacked Bar





Data Visualization Examples

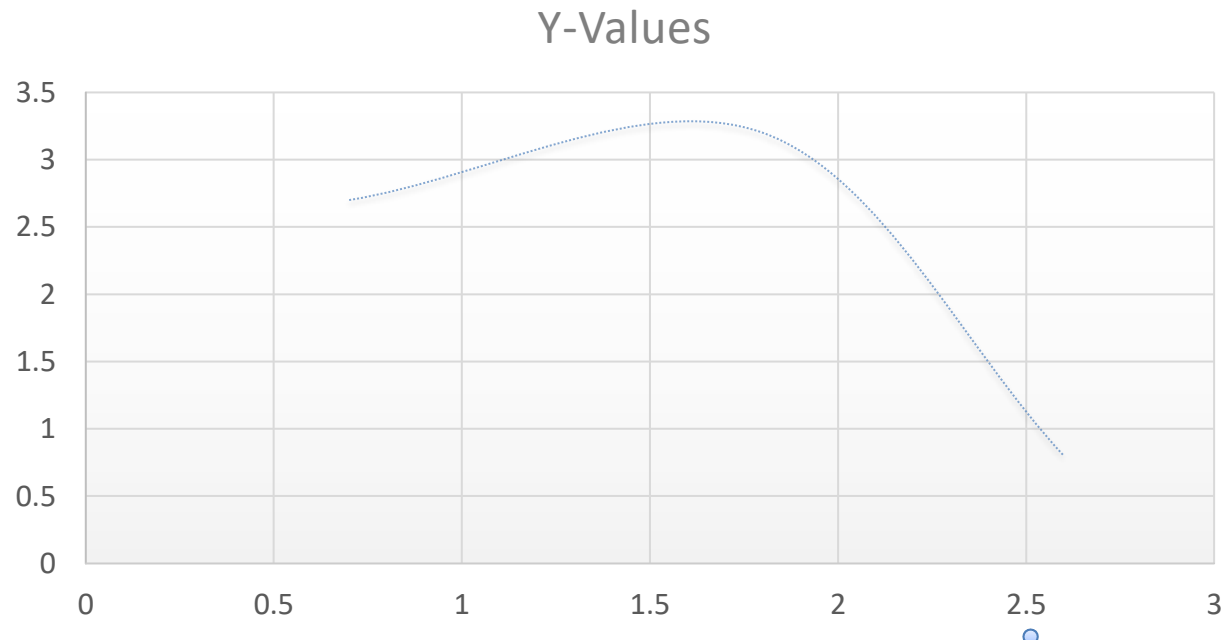
Scatter





Data Visualization Examples

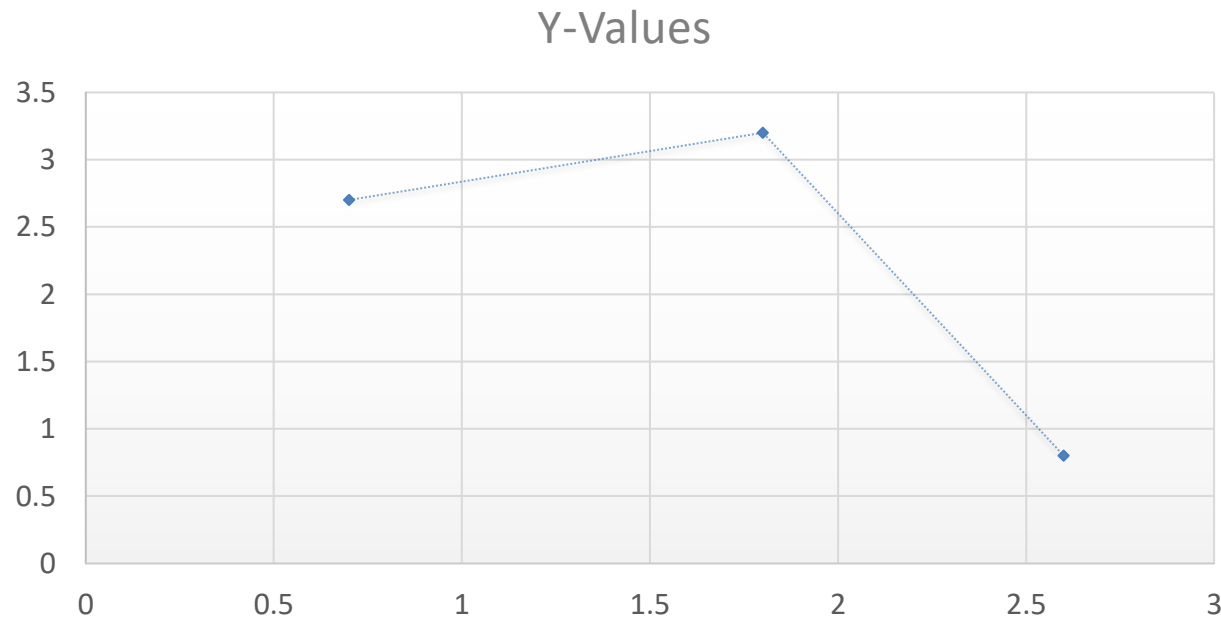
Scatter with Smooth Lines and Markers





Data Visualization Examples

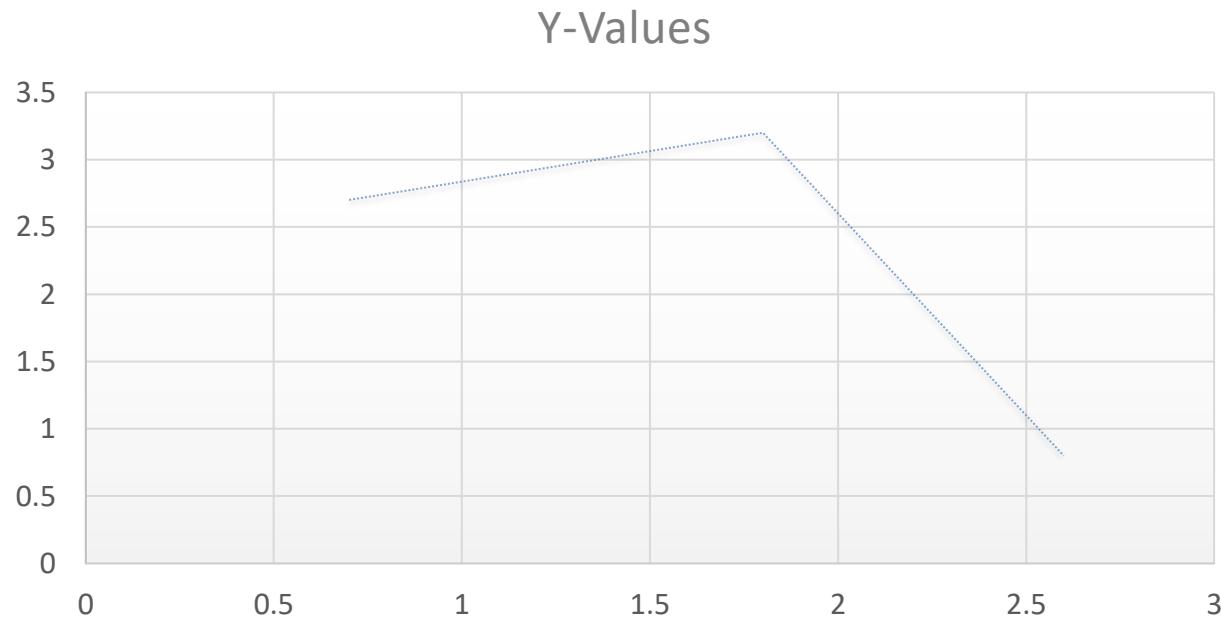
Scatter with Straight Lines and Markers





Data Visualization Examples

Scatter with Straight Lines

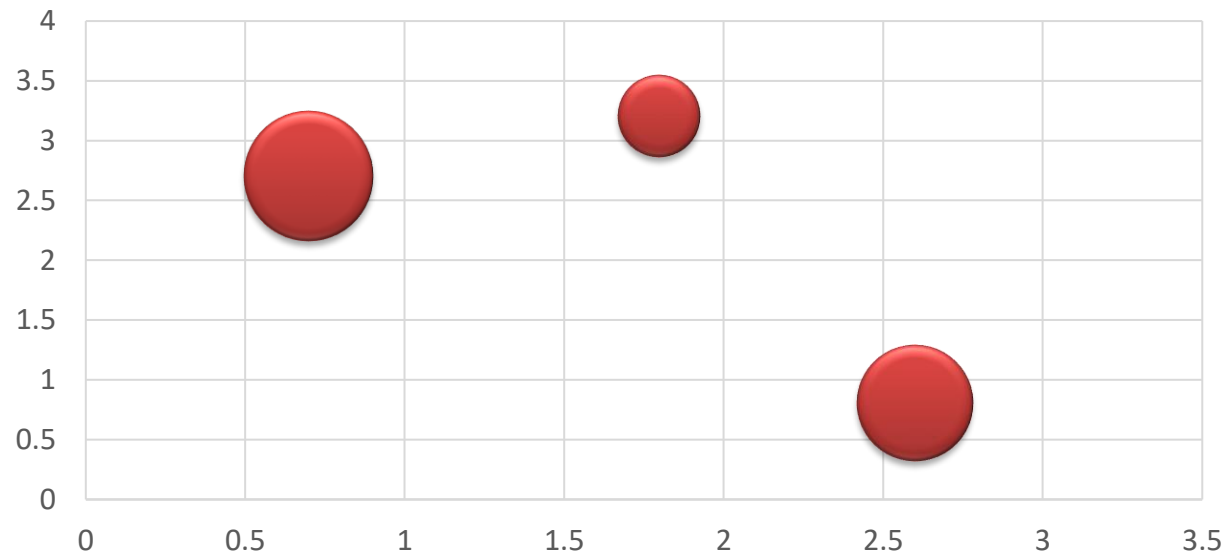




Data Visualization Examples

Bubble

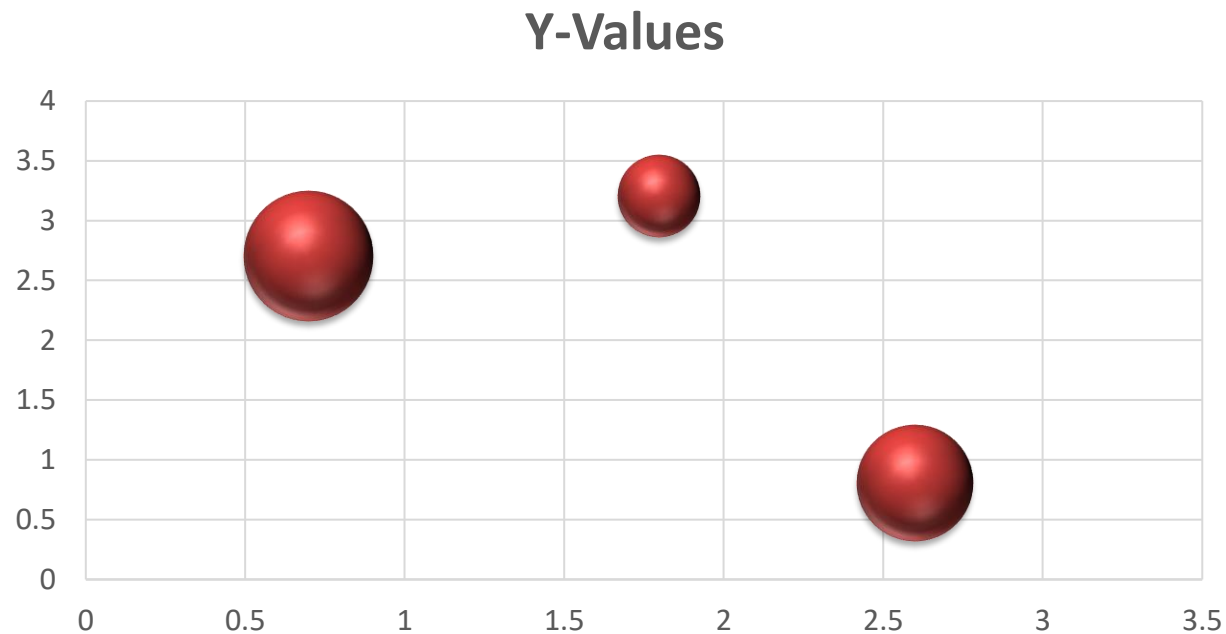
Y-Values





Data Visualization Examples

3-D Bubble

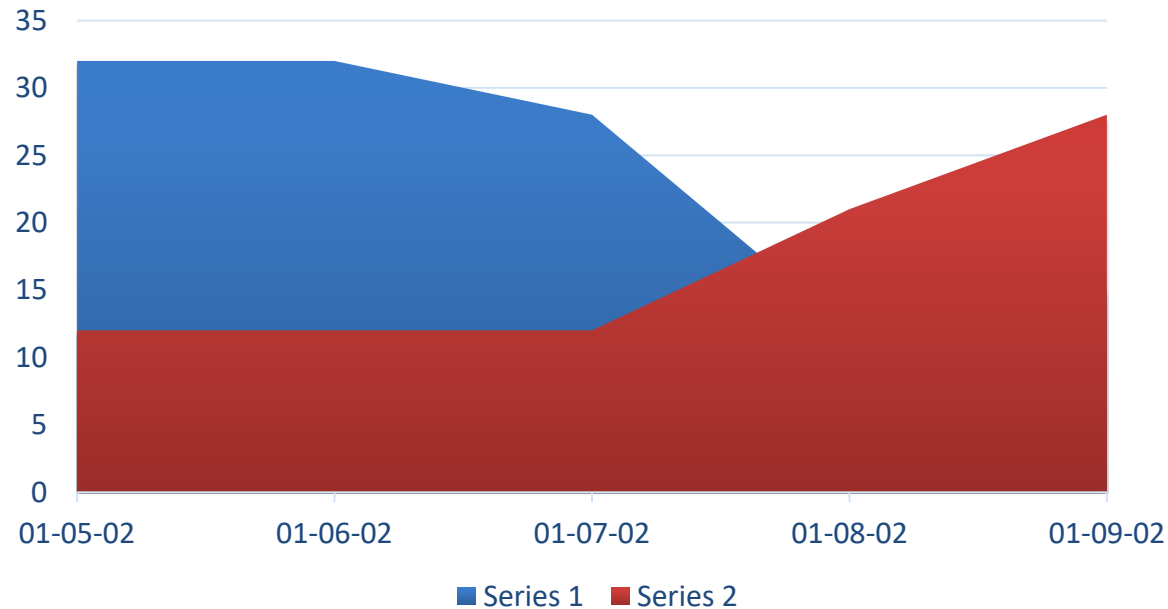




Data Visualization Examples

Area

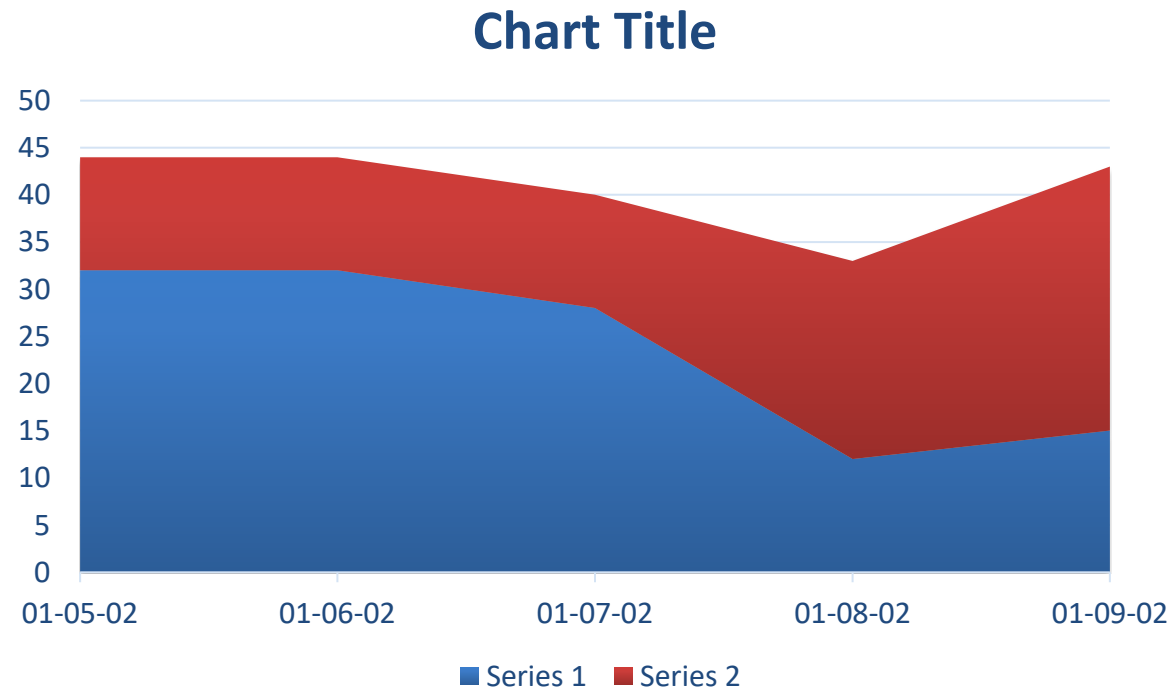
Chart Title





Data Visualization Examples

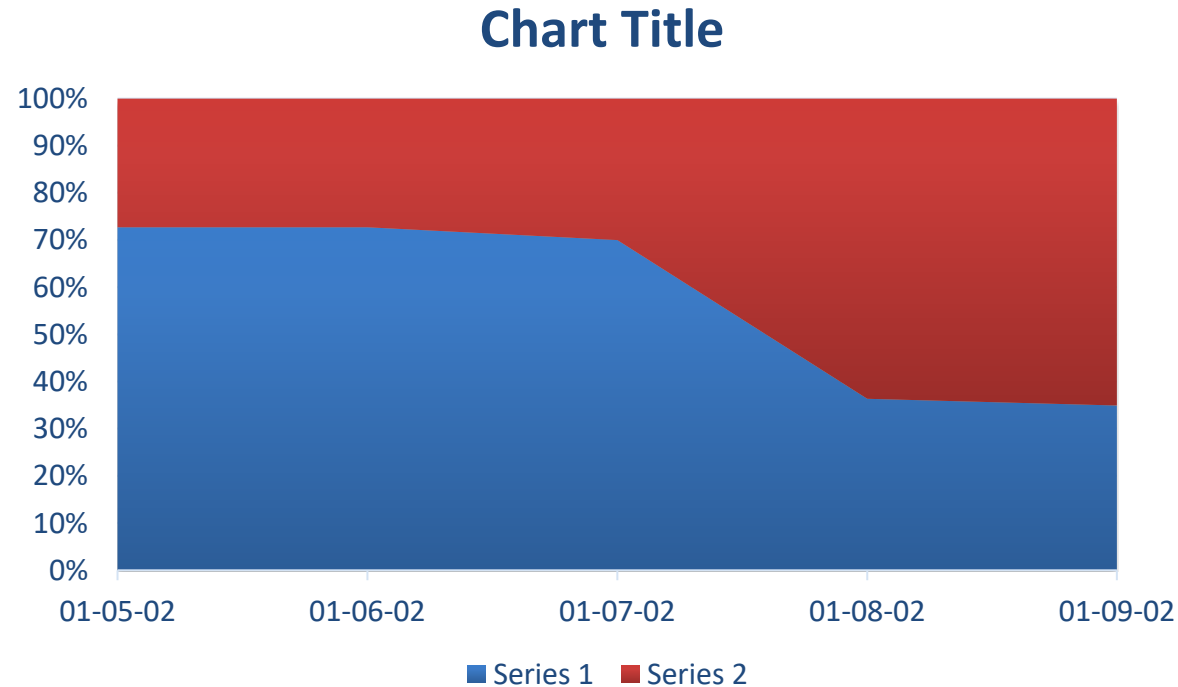
Stacked Area





Data Visualization Examples

100% Stacked Area

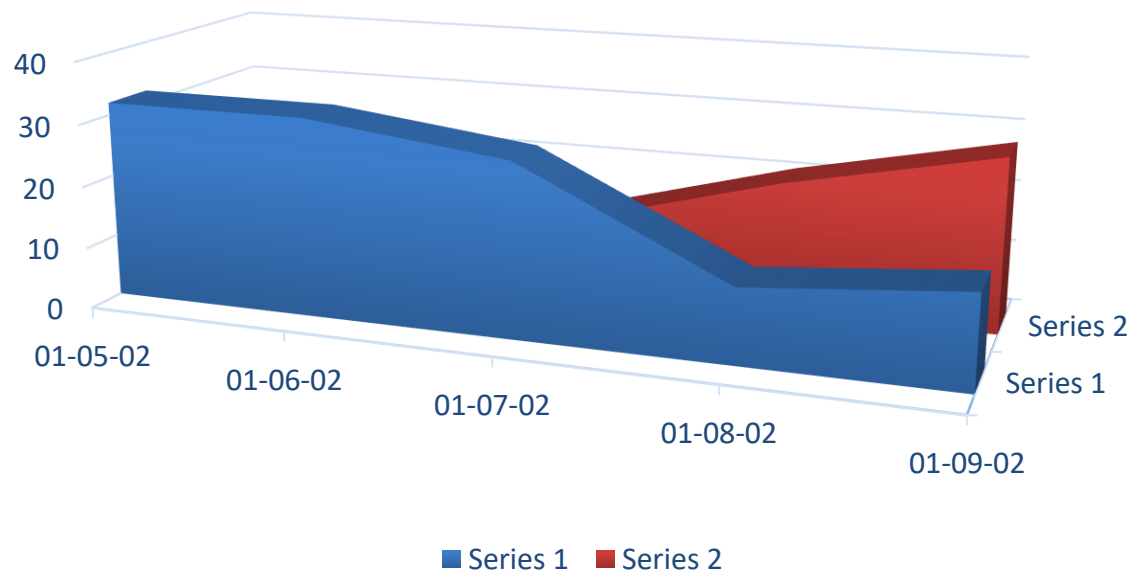




Data Visualization Examples

3-D Area

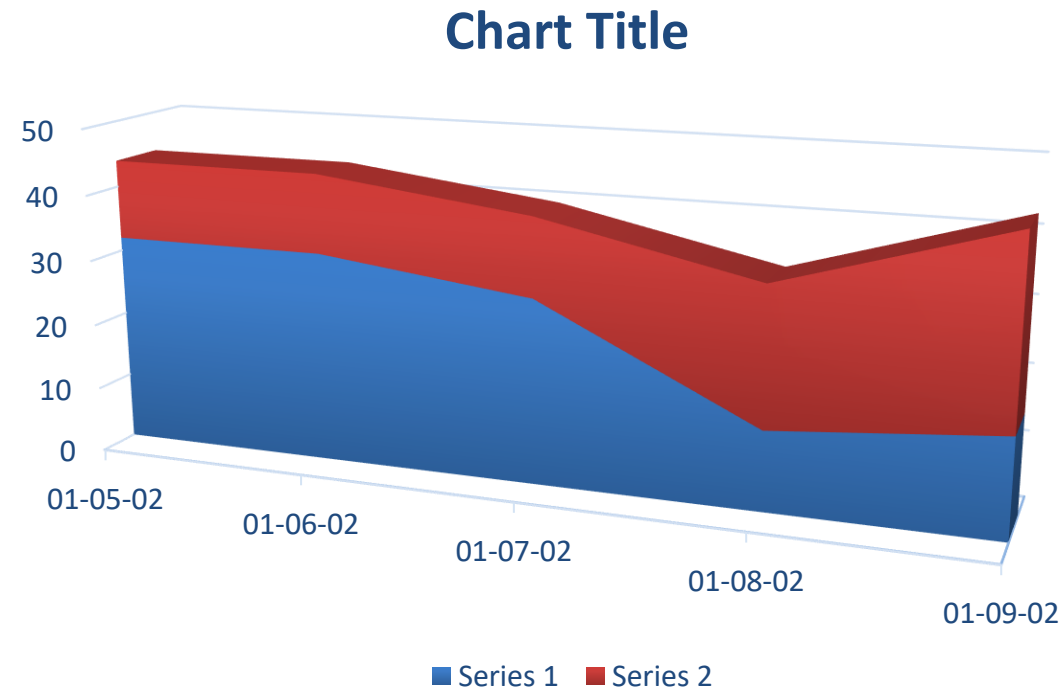
Chart Title





Data Visualization Examples

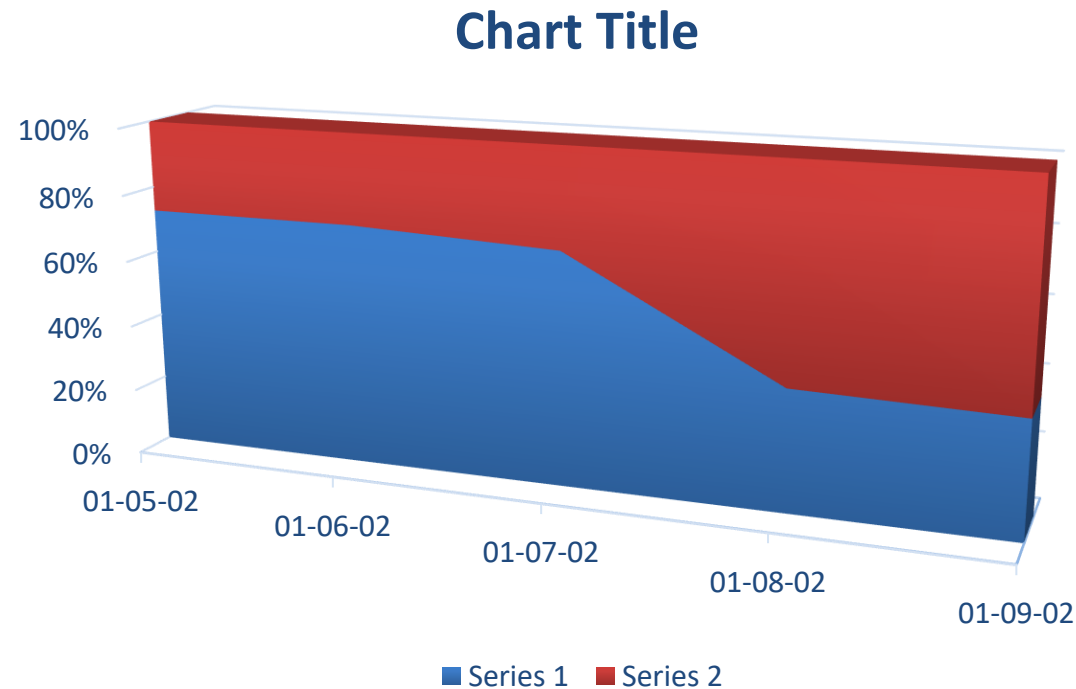
3-D Stacked Area





Data Visualization Examples

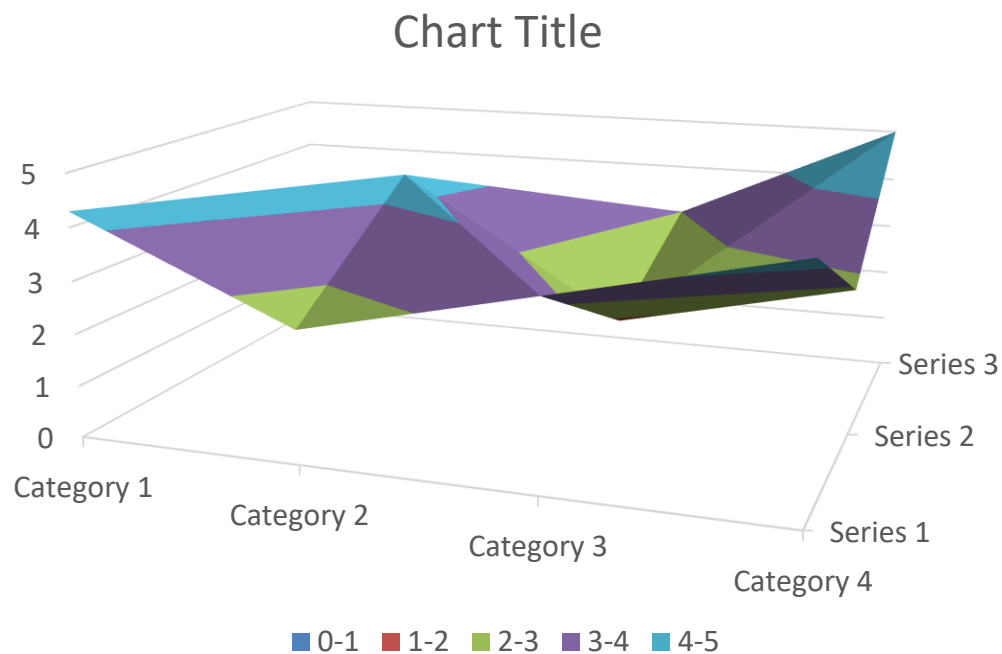
3-D 100% Stacked Area





Data Visualization Examples

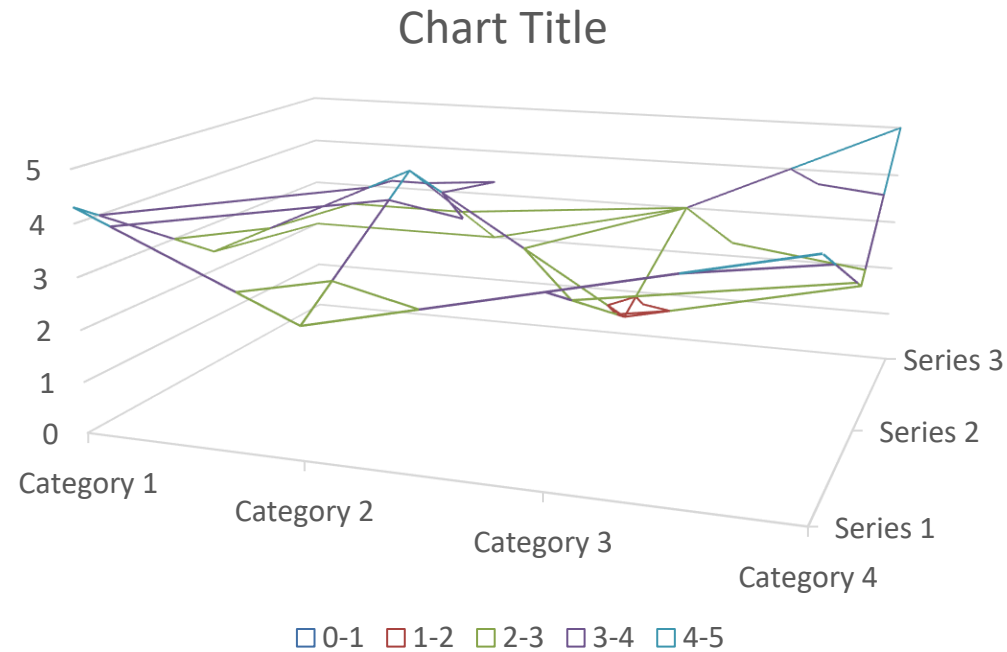
3-D Surface





Data Visualization Examples

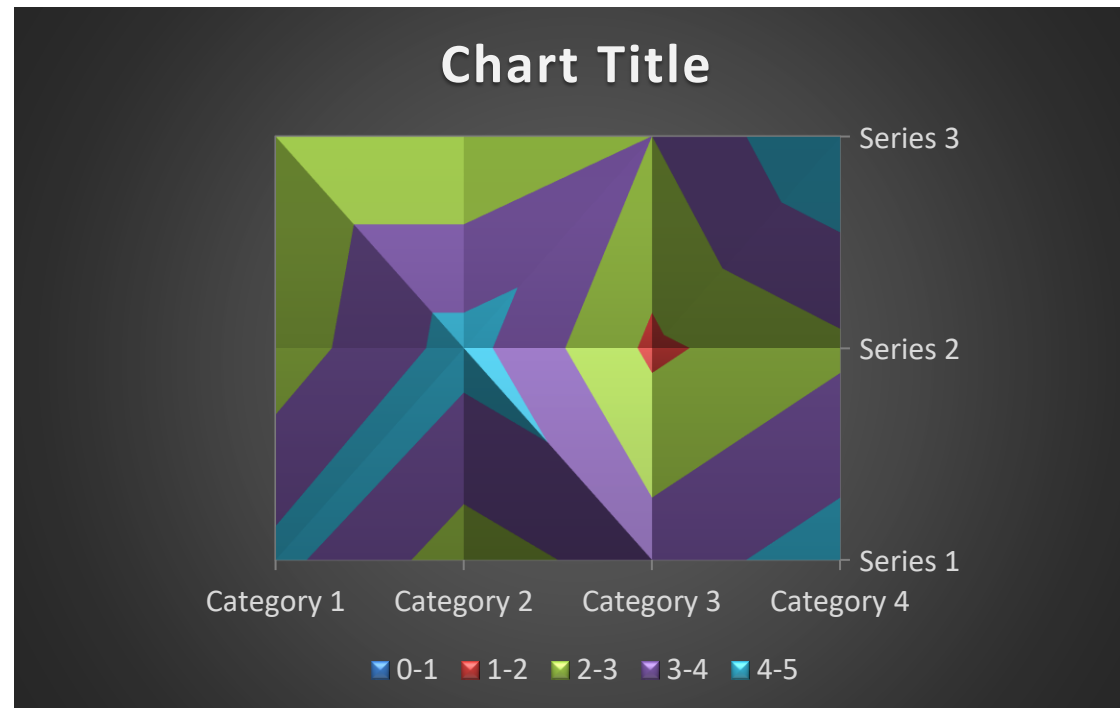
Wireframe 3-D Surface





Data Visualization Examples

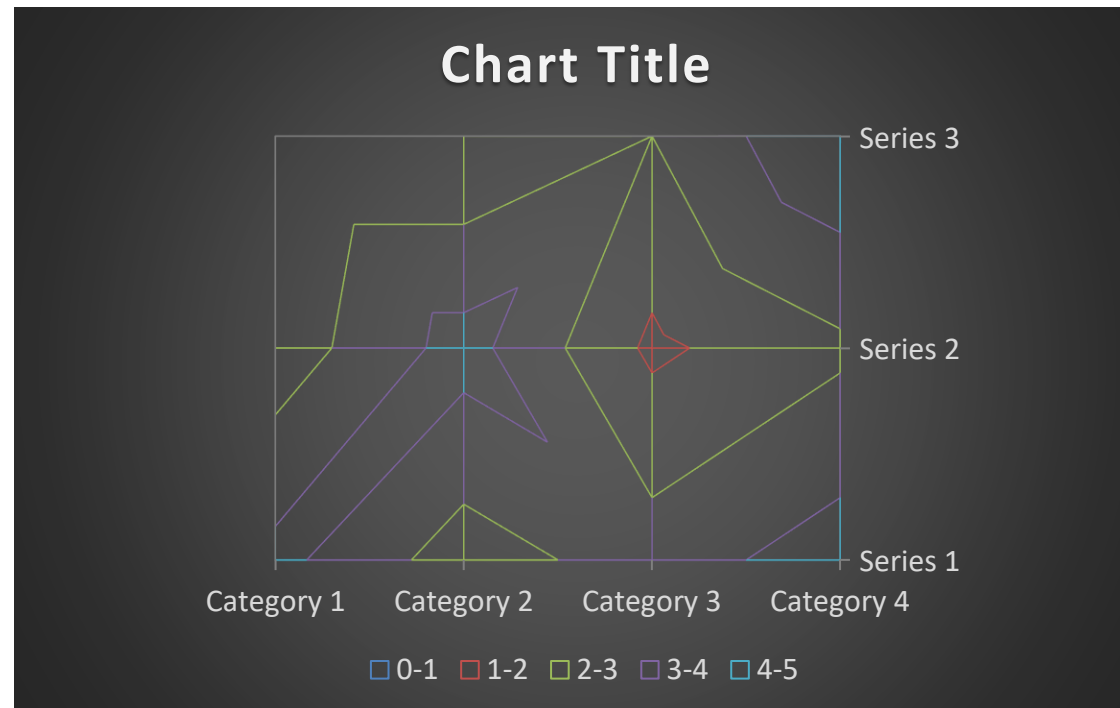
Contour





Data Visualization Examples

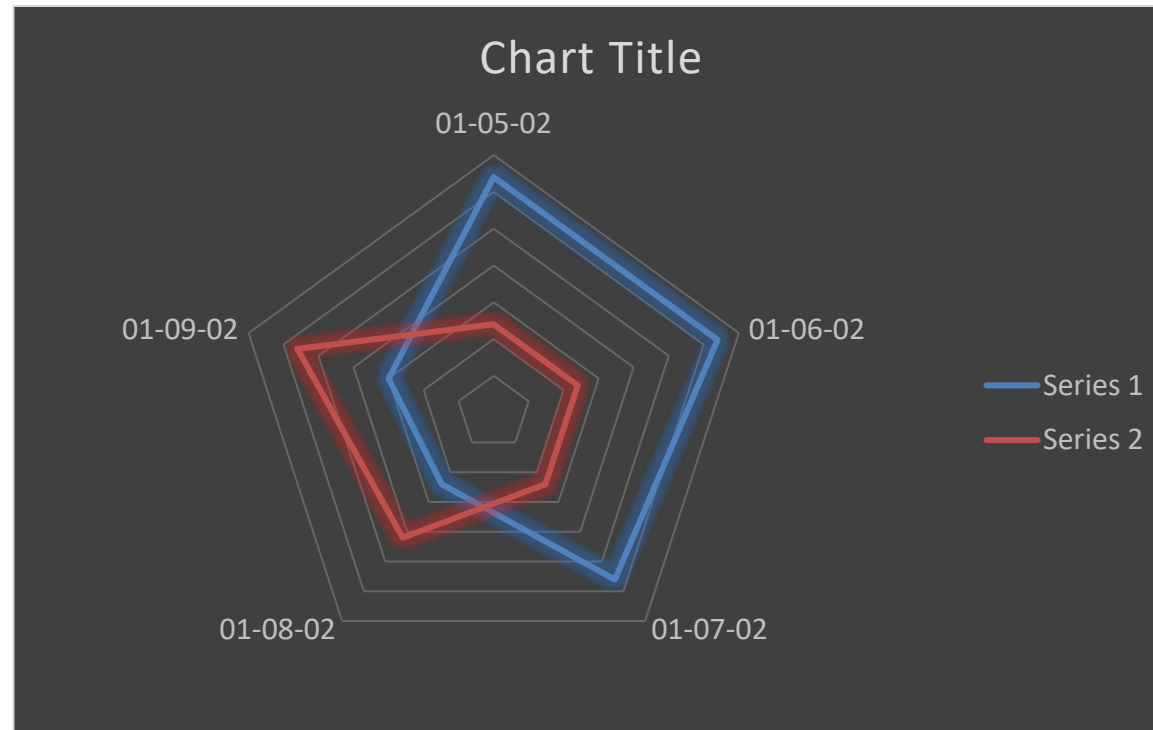
Wireframe Contour





Data Visualization Examples

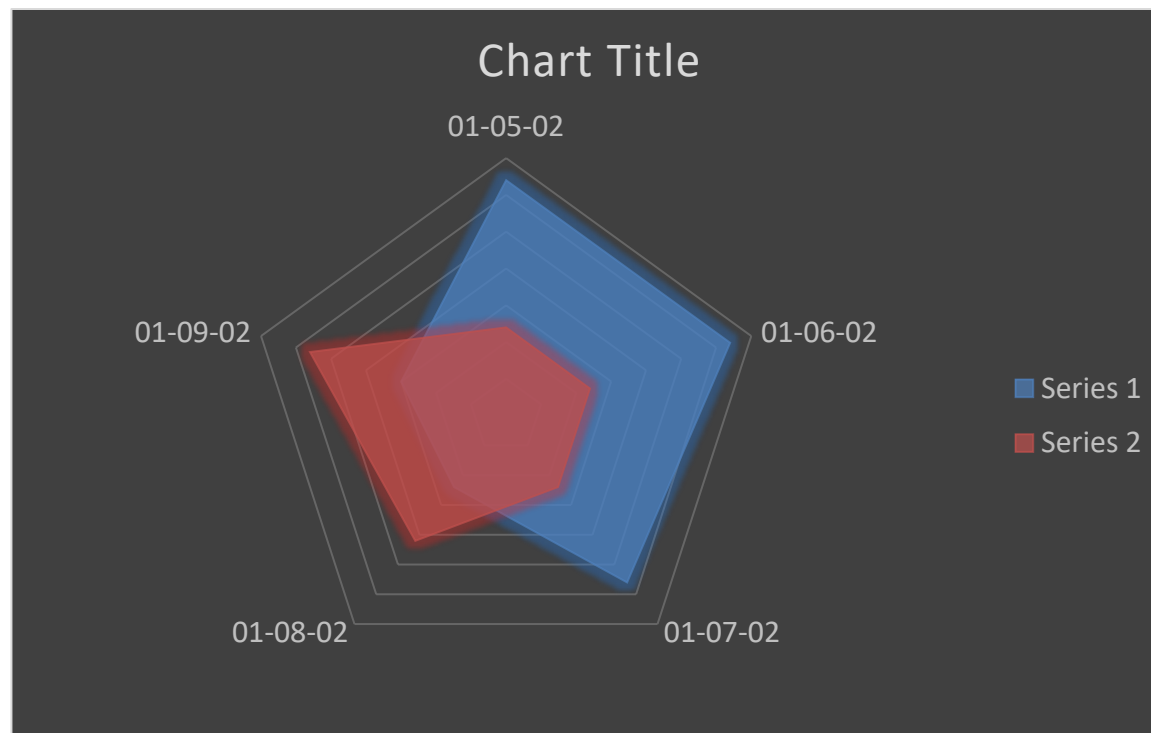
Radar





Data Visualization Examples

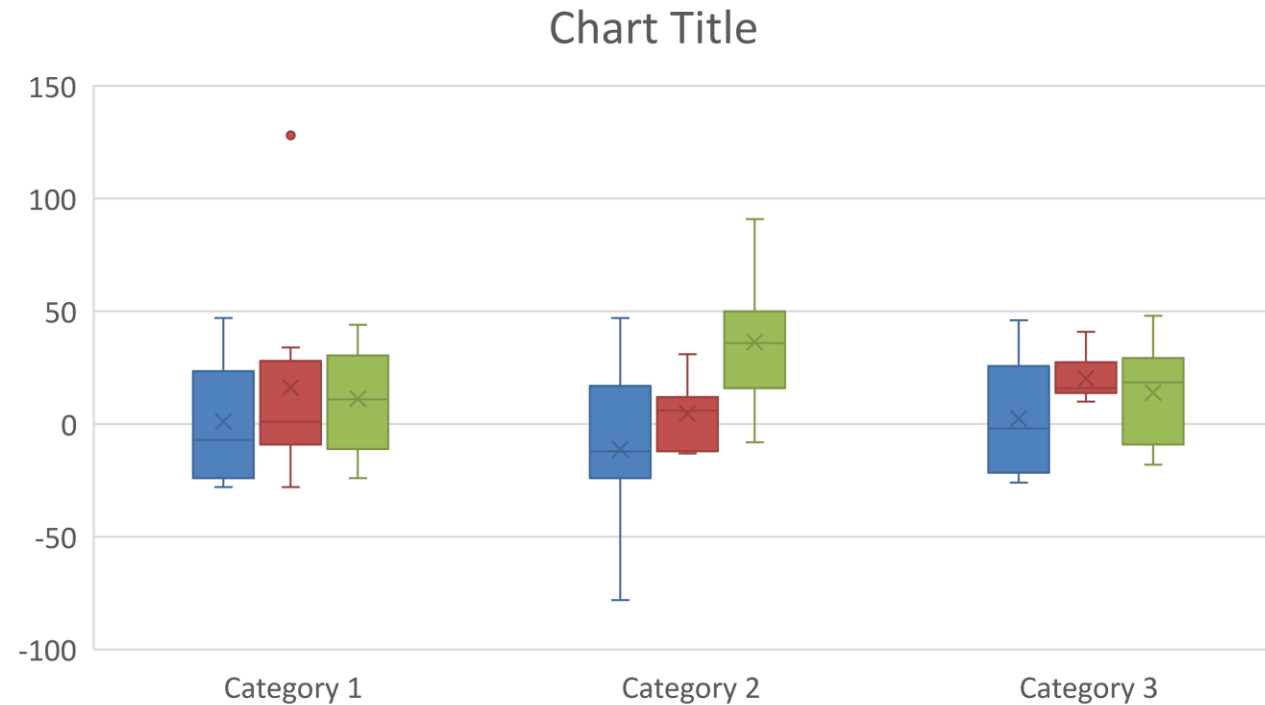
Filled Radar





Data Visualization Examples

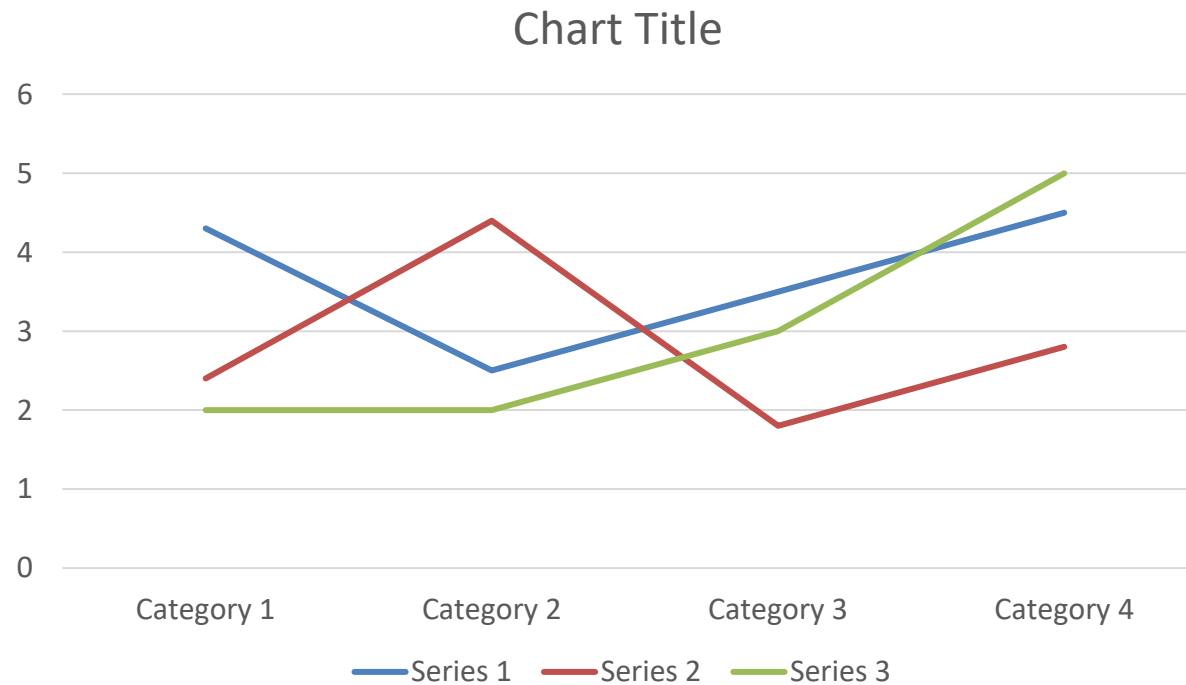
Box and Whisker





Data Visualization Examples

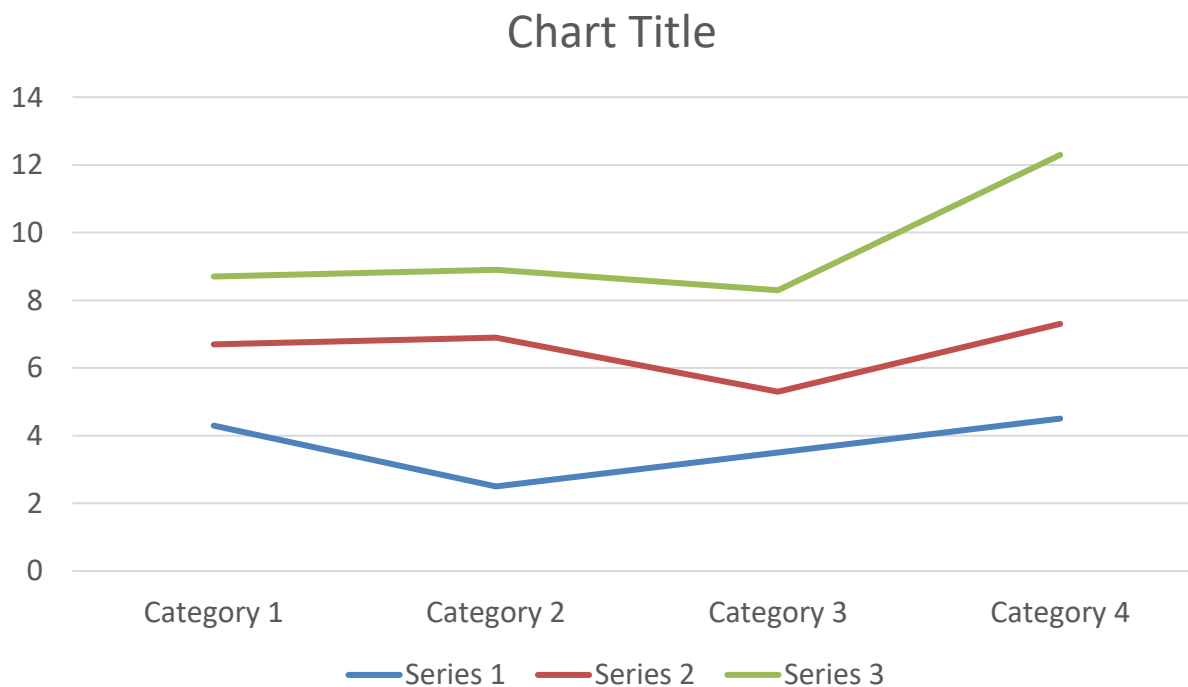
Line





Data Visualization Examples

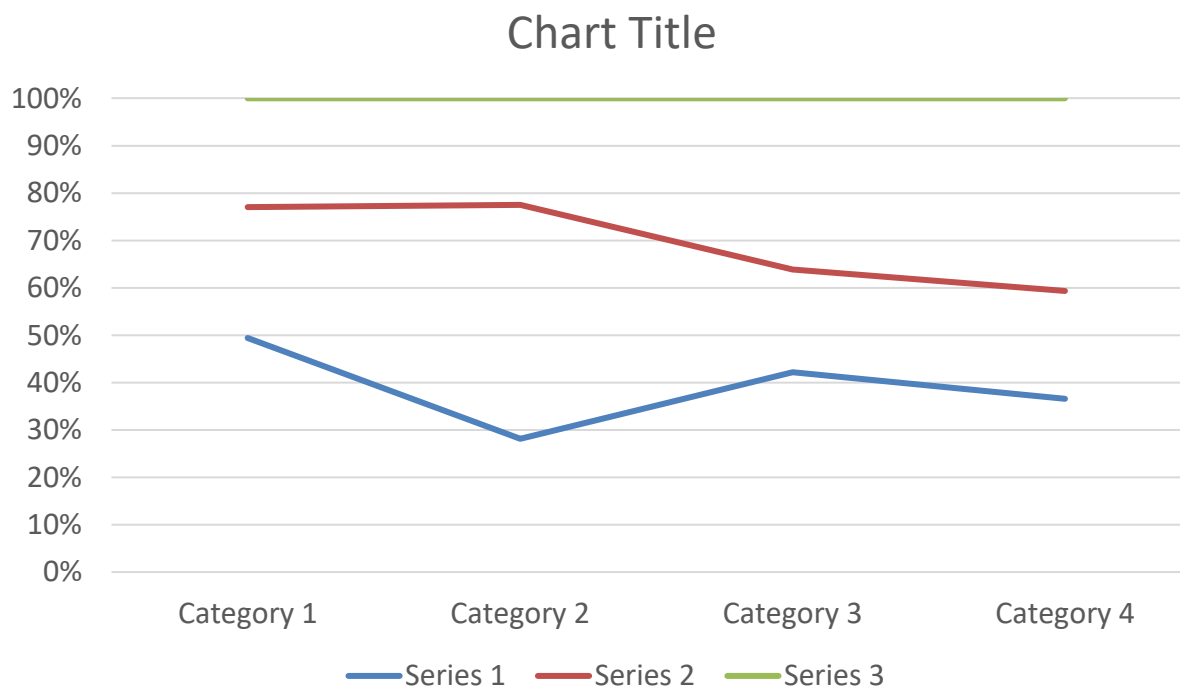
Stacked Line





Data Visualization Examples

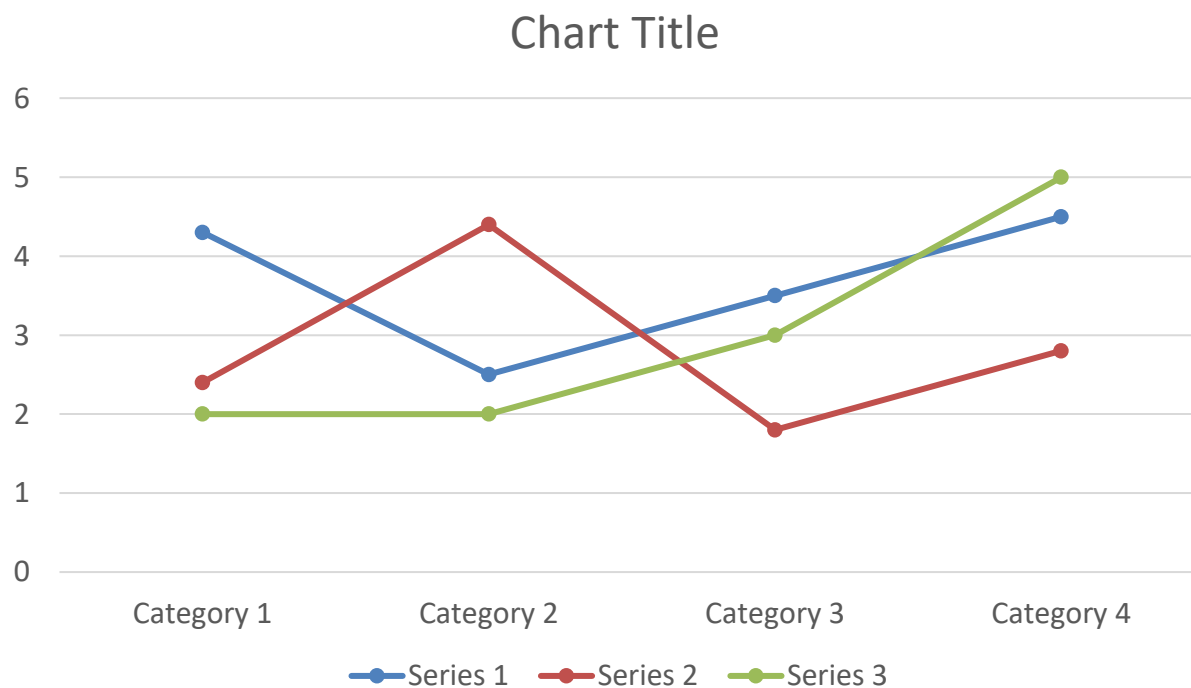
100% Stacked Line





Data Visualization Examples

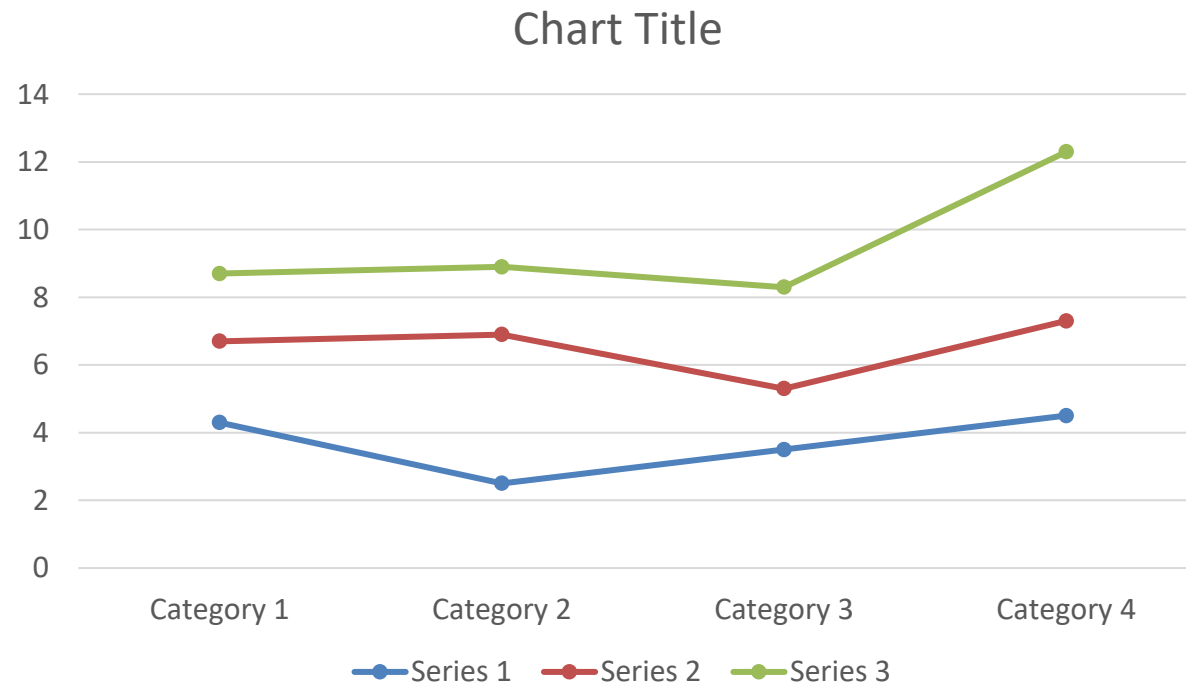
Line with Markers





Data Visualization Examples

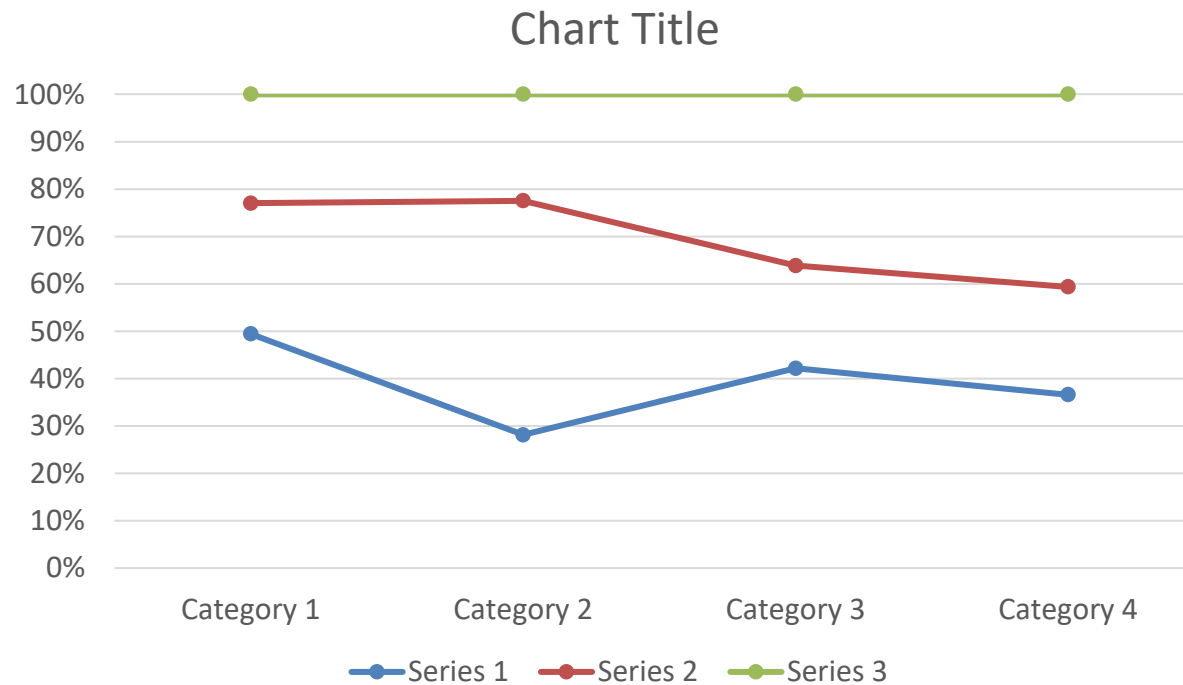
Stacked Line with Markers





Data Visualization Examples

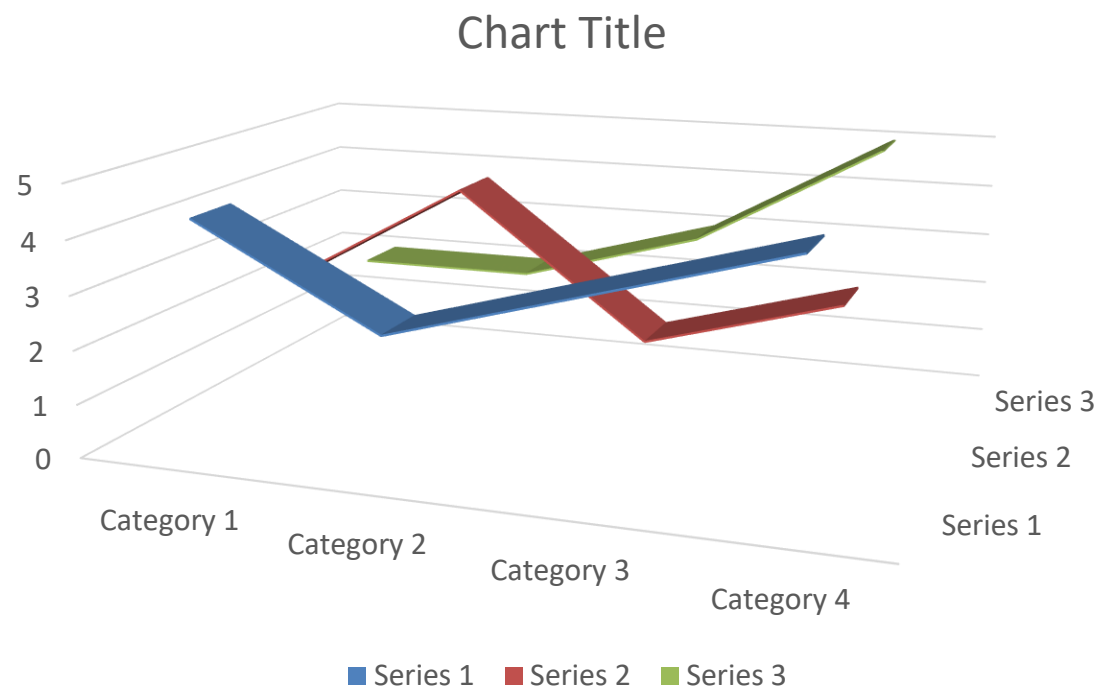
100% Stacked Line with Markers





Data Visualization Examples

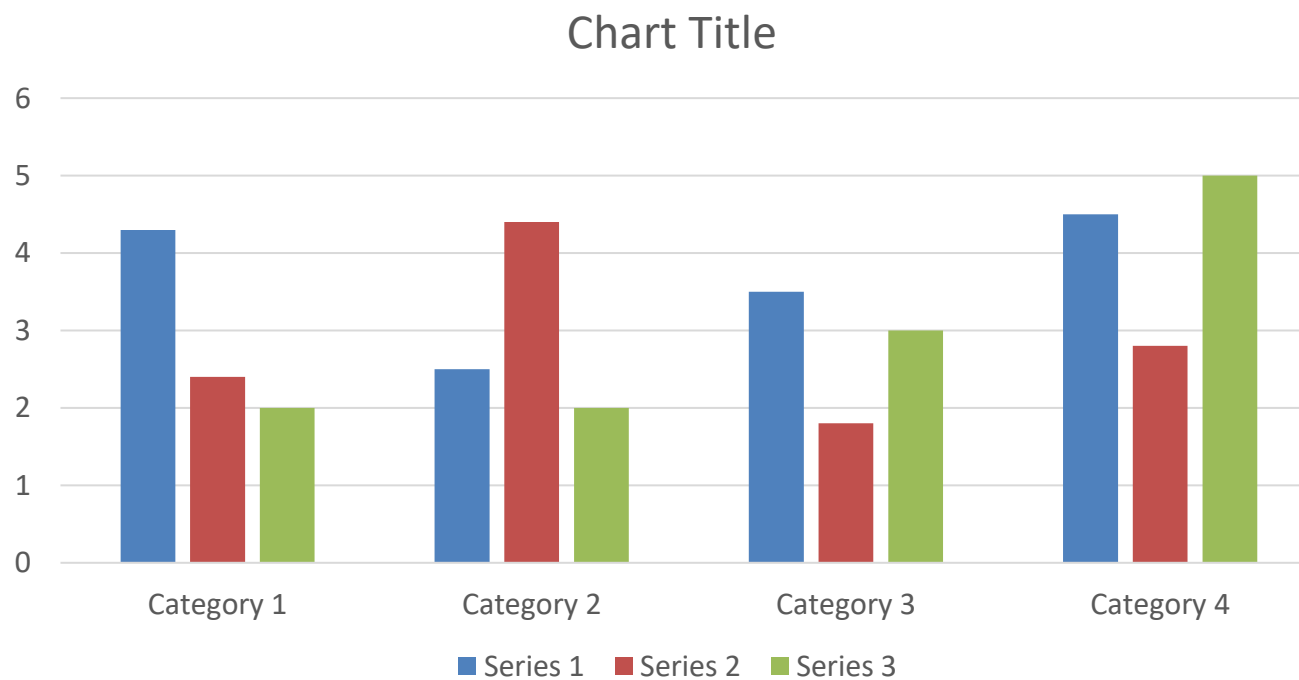
3-D Line





Data Visualization Examples

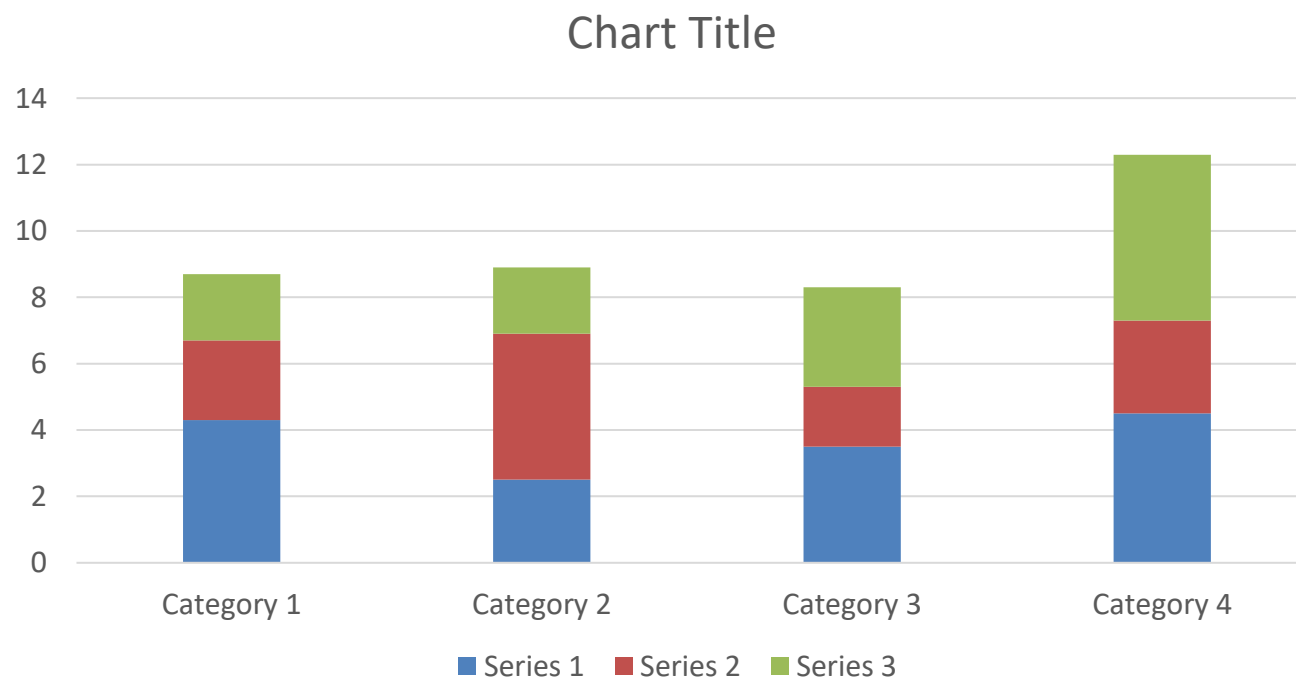
Clustered Column





Data Visualization Examples

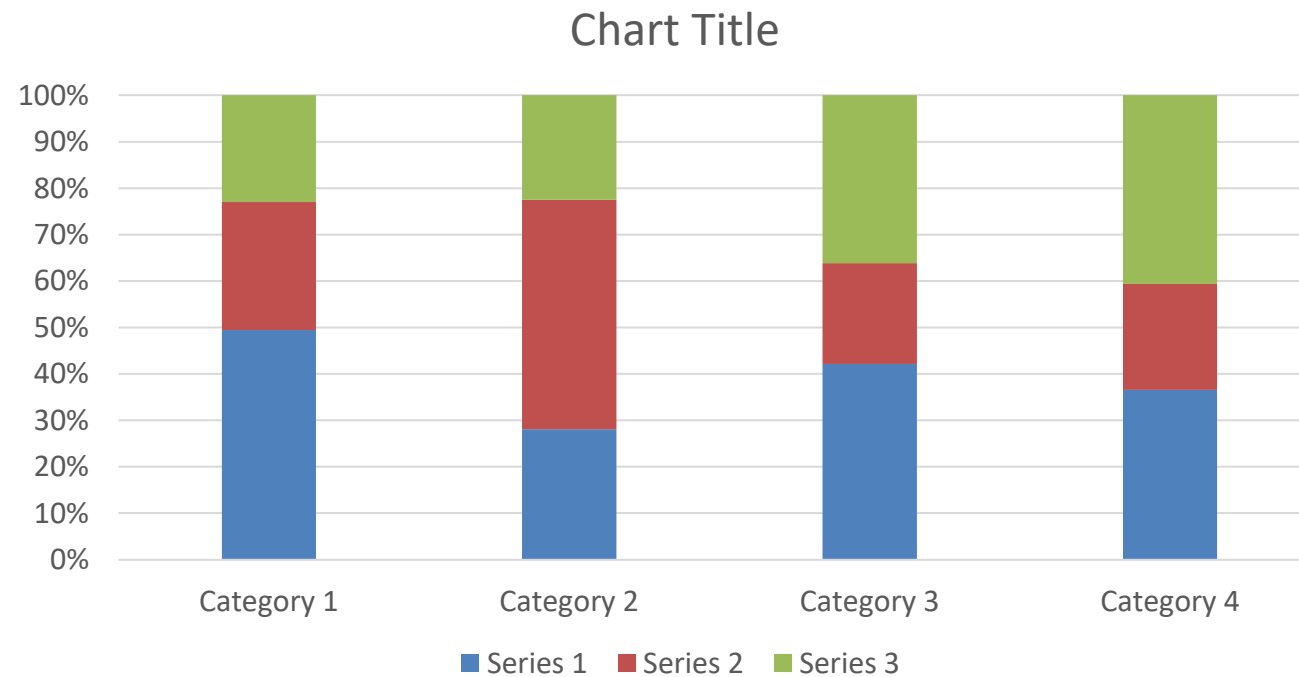
Stacked Column





Data Visualization Examples

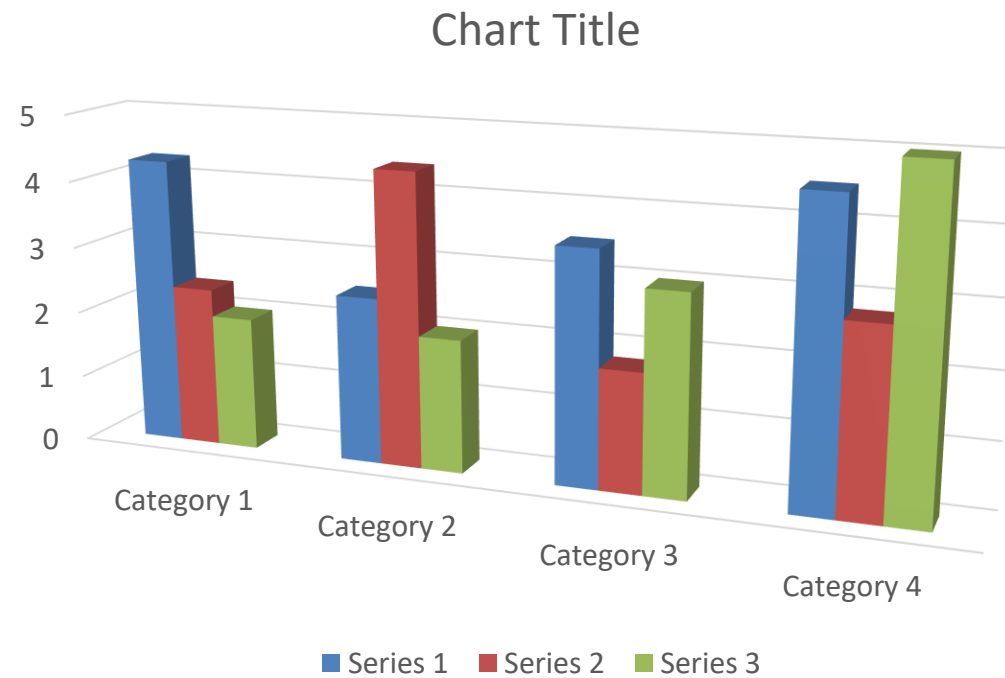
100% Stacked Column





Data Visualization Examples

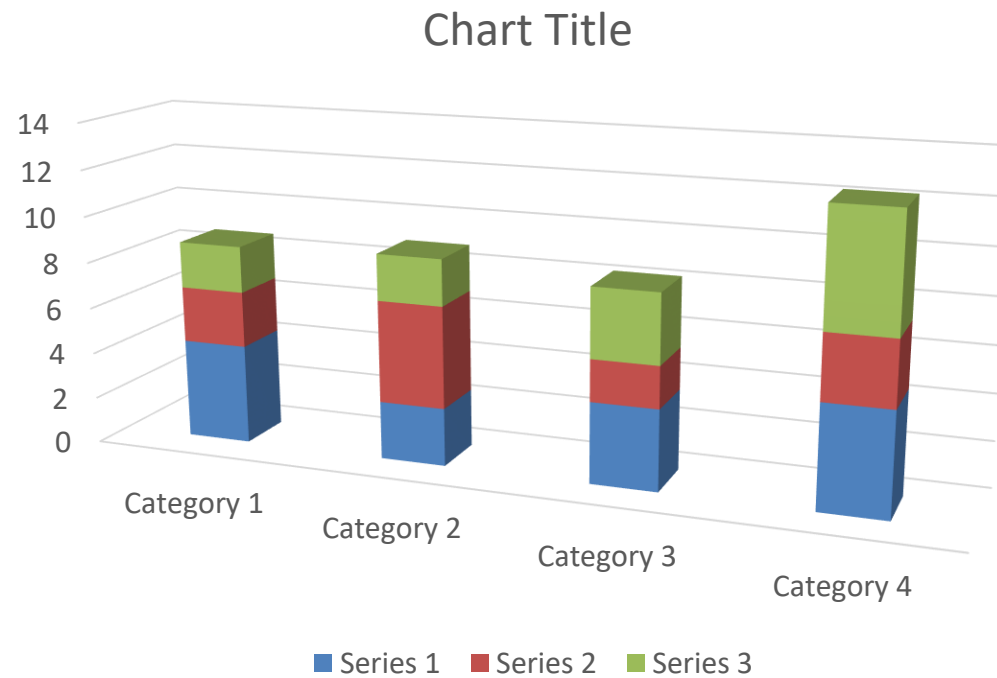
3-D Clustered Column





Data Visualization Examples

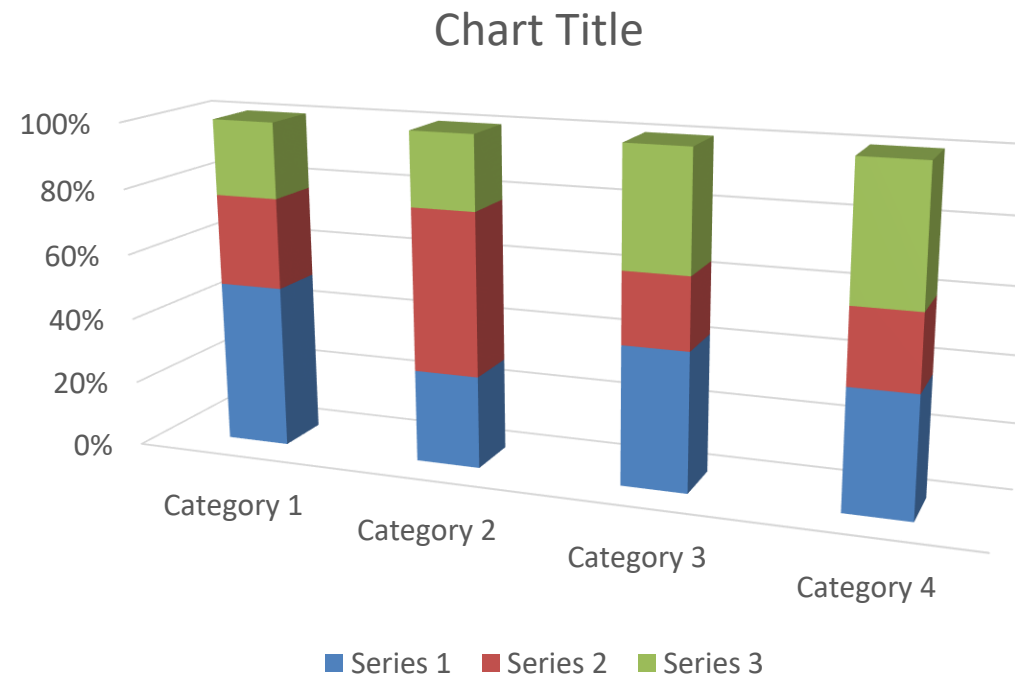
3-D Stacked Column





Data Visualization Examples

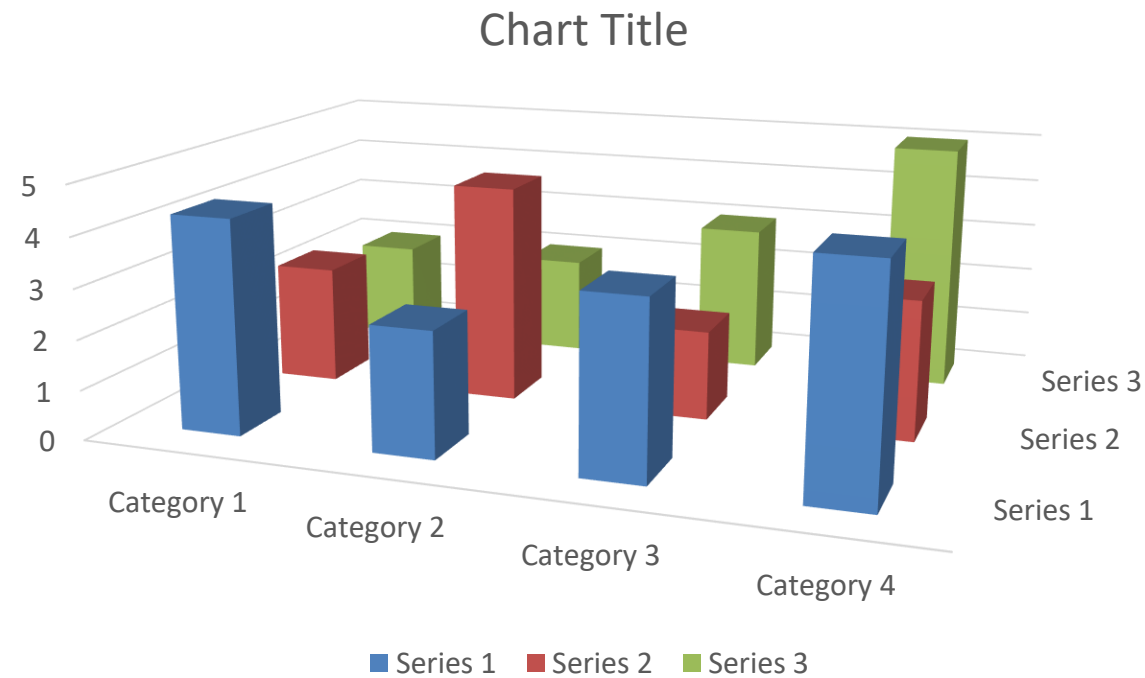
3-D 100% Stacked Column





Data Visualization Examples

3-D Column





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