

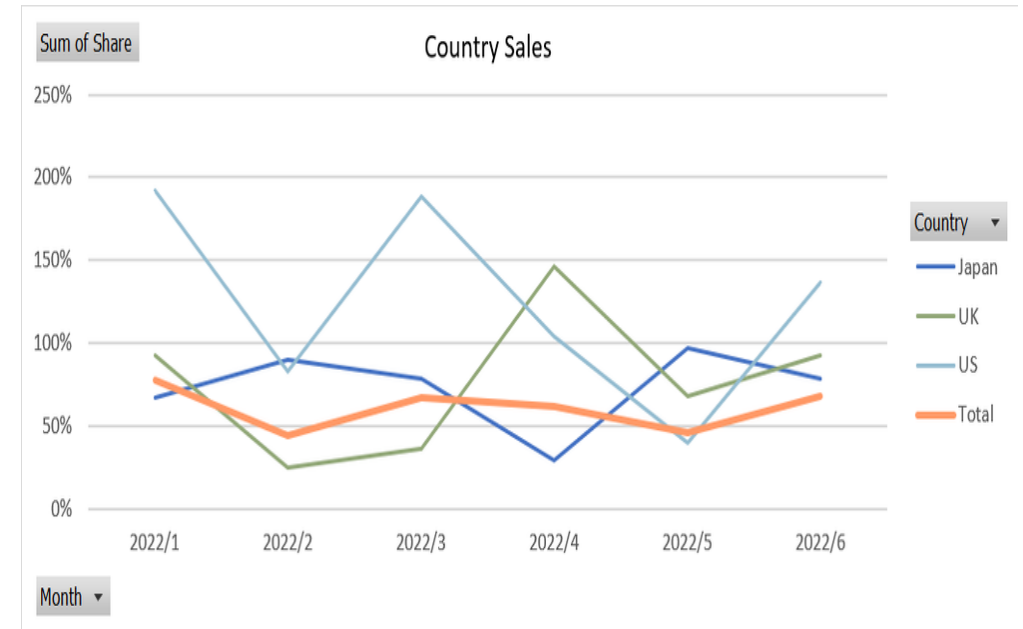
# POWER BI GRAPHS AND CHARTS

- Tushar B. Kute
- <https://tusharkute.com>



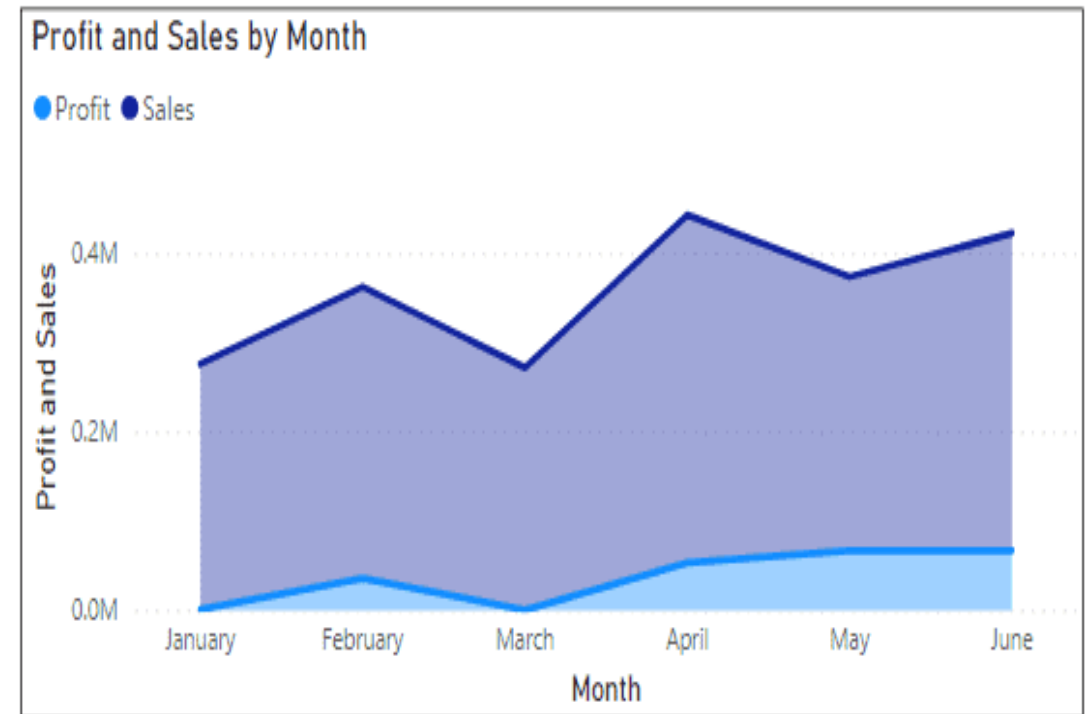
# Line Chart

- A line chart is suitable for tracking changes and trends over time.
- The x-axis represents time (e.g., dates) or any other continuous variable, while the y-axis represents the values being measured.
- Ideal for analyzing stock prices, sales data, or any data that varies continuously.



# Area Chart

- An area chart is similar to a line chart but emphasizes the cumulative effect of data.
- It is useful when displaying data that needs to show the cumulative sum of values.
- The area under the line represents the accumulated value at any given point.



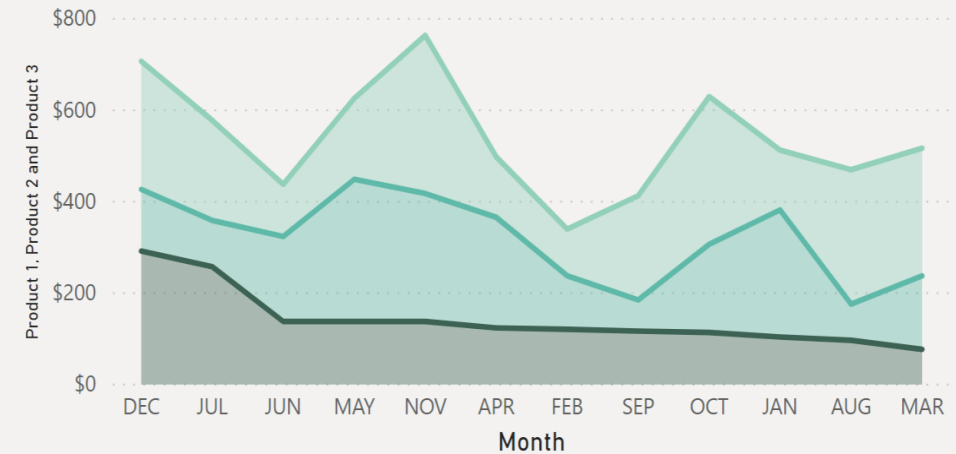
# Stacked Area Chart

- A stacked area chart allows for the comparison of multiple cumulative data sets.
- Each category is layered on top of another, visually showing their contribution to the whole.
- Ideal for visualizing the cumulative performance of multiple products or departments.

**Stacked Area Chart**

Products by Month

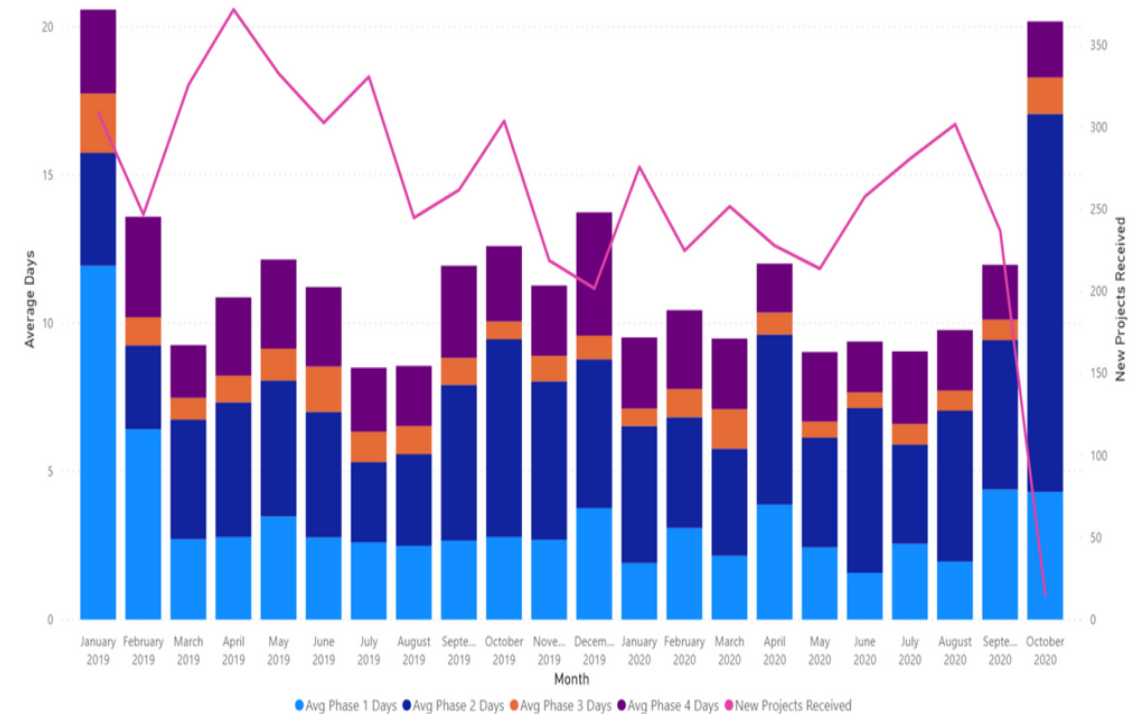
● Product 1 ● Product 2 ● Product 3



# Line and Stacked Column Chart

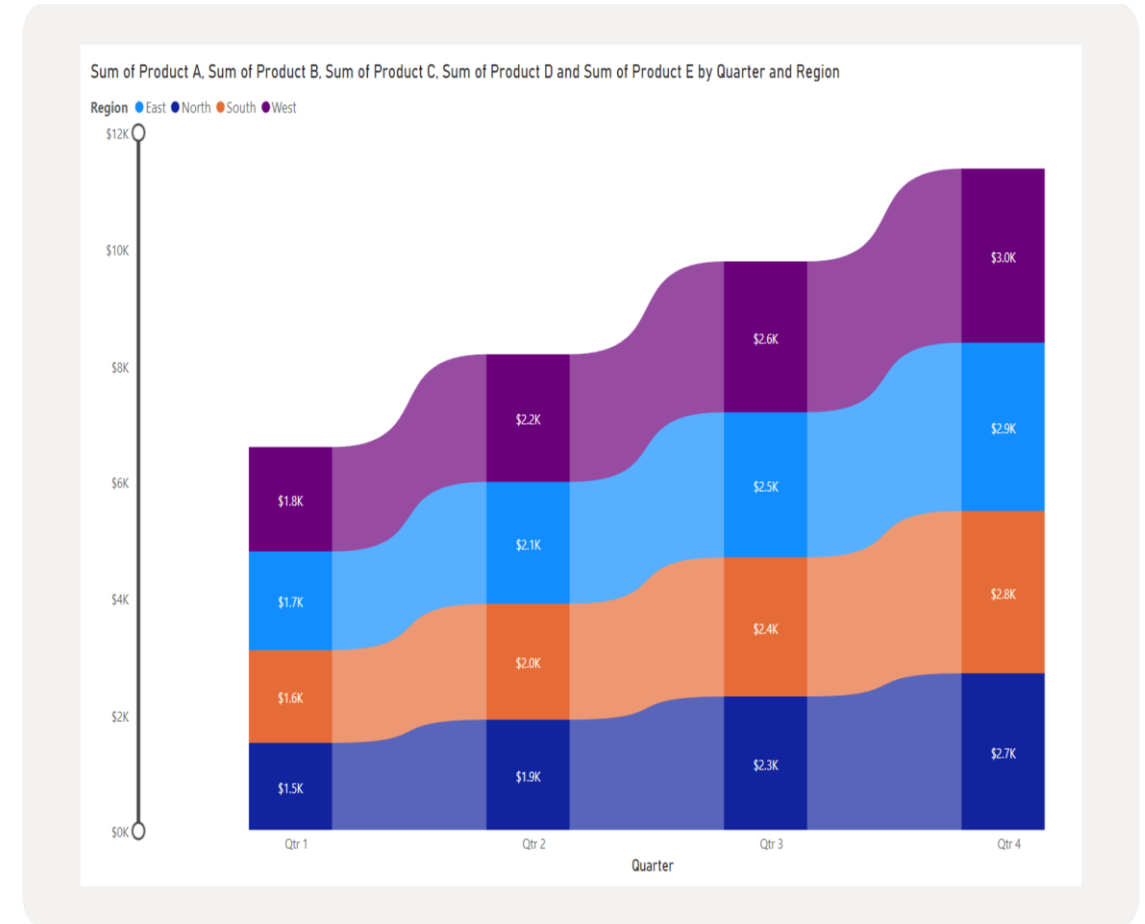
- Line and Stacked Column Chart is a powerful visualization tool that combines the benefits of line and column charts in a single visual.
- It is useful for comparing and analyzing trends over time, as well as comparing different categories within a dataset.
- The line chart represents continuous data, while the stacked column chart represents categorical data.

Avg Phase 1 Days, Avg Phase 2 Days, Avg Phase 3 Days, Avg Phase 4 Days and New Projects Received by Month



# Ribbon Chart

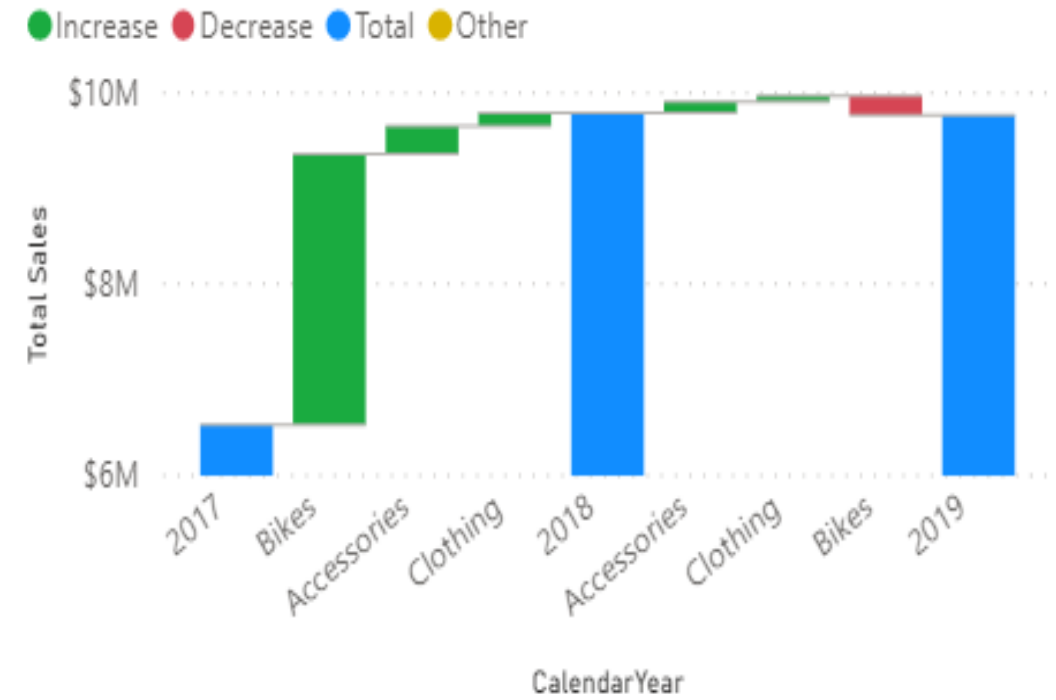
- The Ribbon Chart is a unique visualization that enables the display of hierarchical data and trends.
- It is particularly useful for showing the progress or distribution of a specific category within a hierarchy.
- Each level of the hierarchy is represented by a ribbon, with the width of the ribbon indicating the proportion or value of the category.



# Waterfall Chart

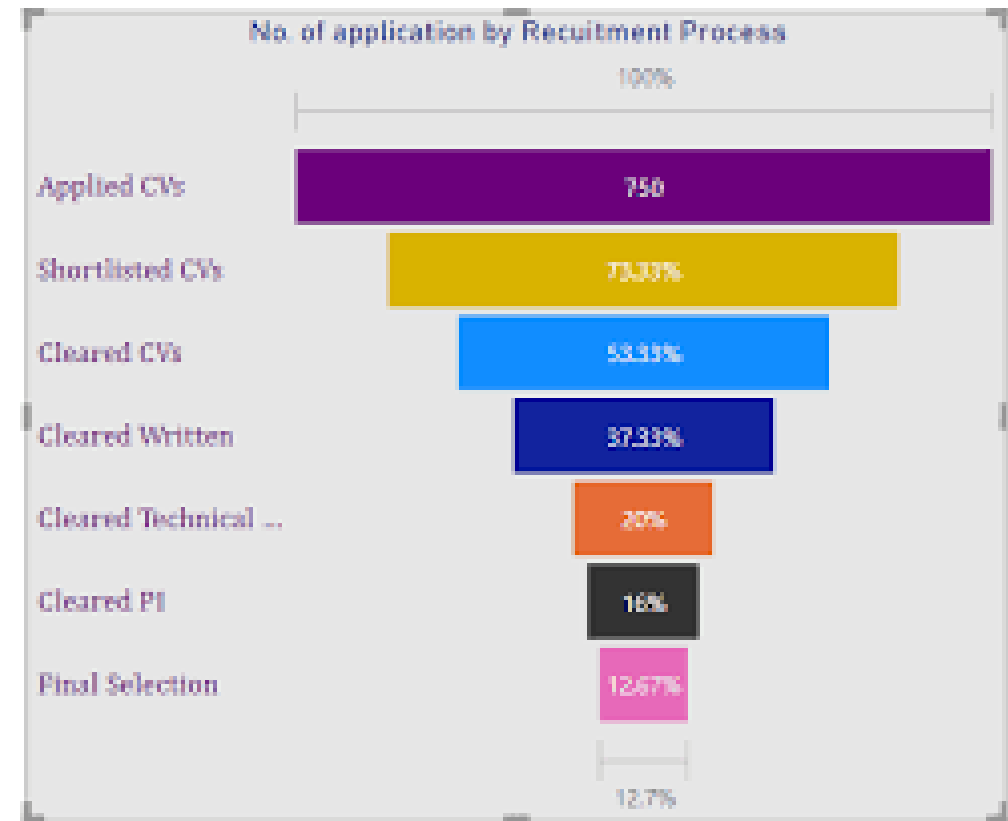
- The Waterfall Chart is used to visualize positive and negative changes in data, typically financial data.
- It provides a clear representation of how each component contributes to the overall total, and highlights the impact of each component.

Total Sales by CalendarYear and Category



# Funnel chart

- Funnel charts are used to represent sequential stages of a process.
- The width of each stage represents the quantity or value at that stage.
- Easy-to-understand visualization of conversion rates and sales
- Track and compare the performance of different stages

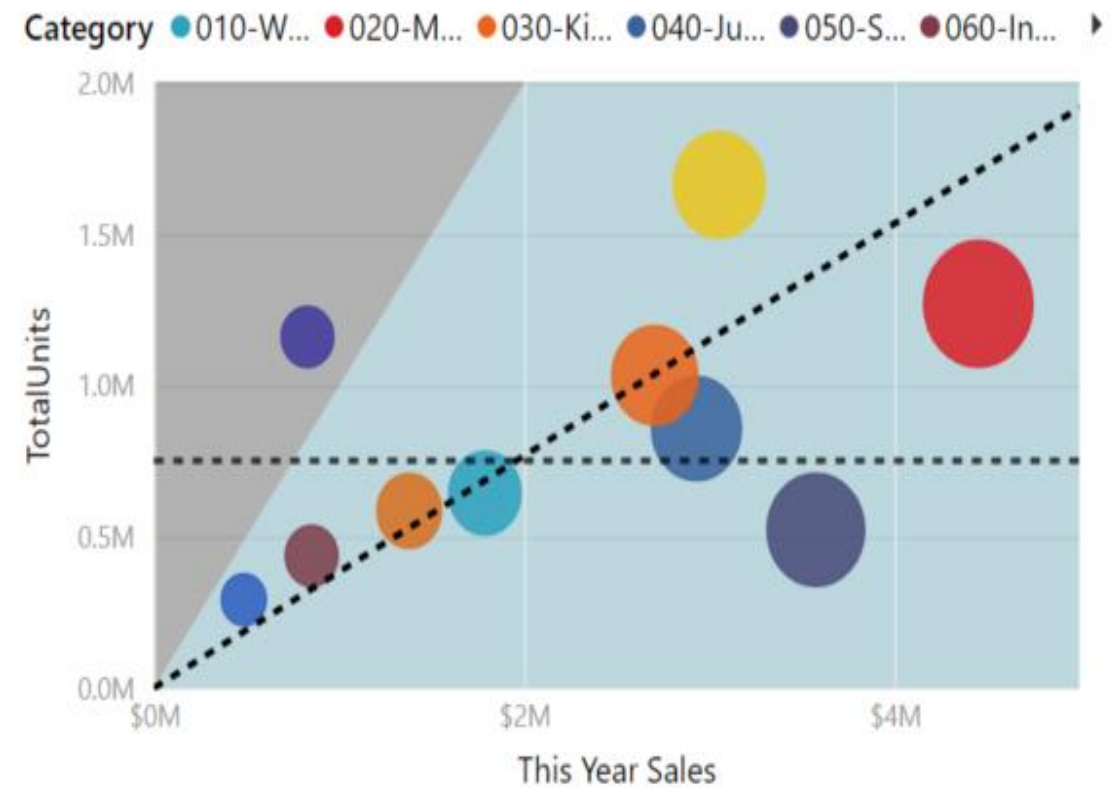




# Scatter Chart

- Scatter charts display individual data points on a Cartesian plane
- Useful for identifying patterns, correlations, or outliers

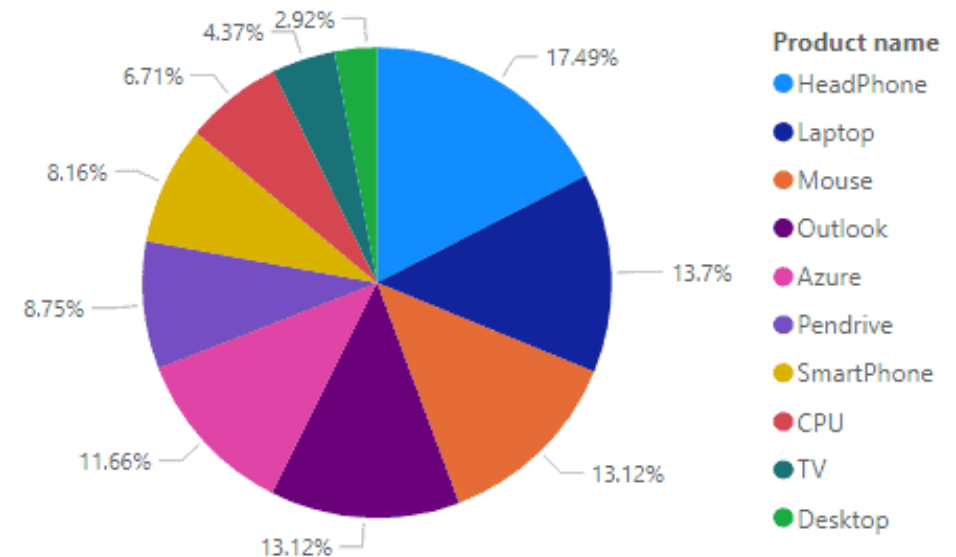
This Year Sales and TotalUnits by Category



# Pie Chart

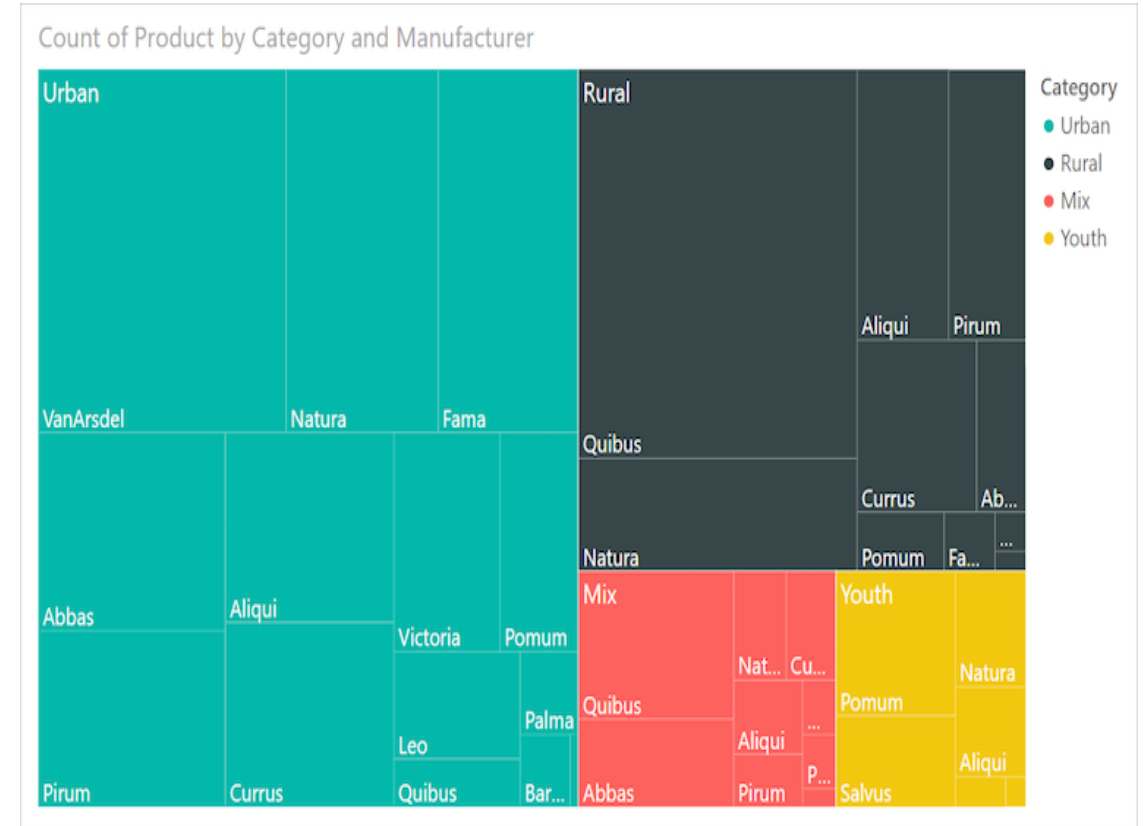
- Pie charts represent data as slices of a circle
- Effective for showing the proportion of different categories

Total Price by Product name



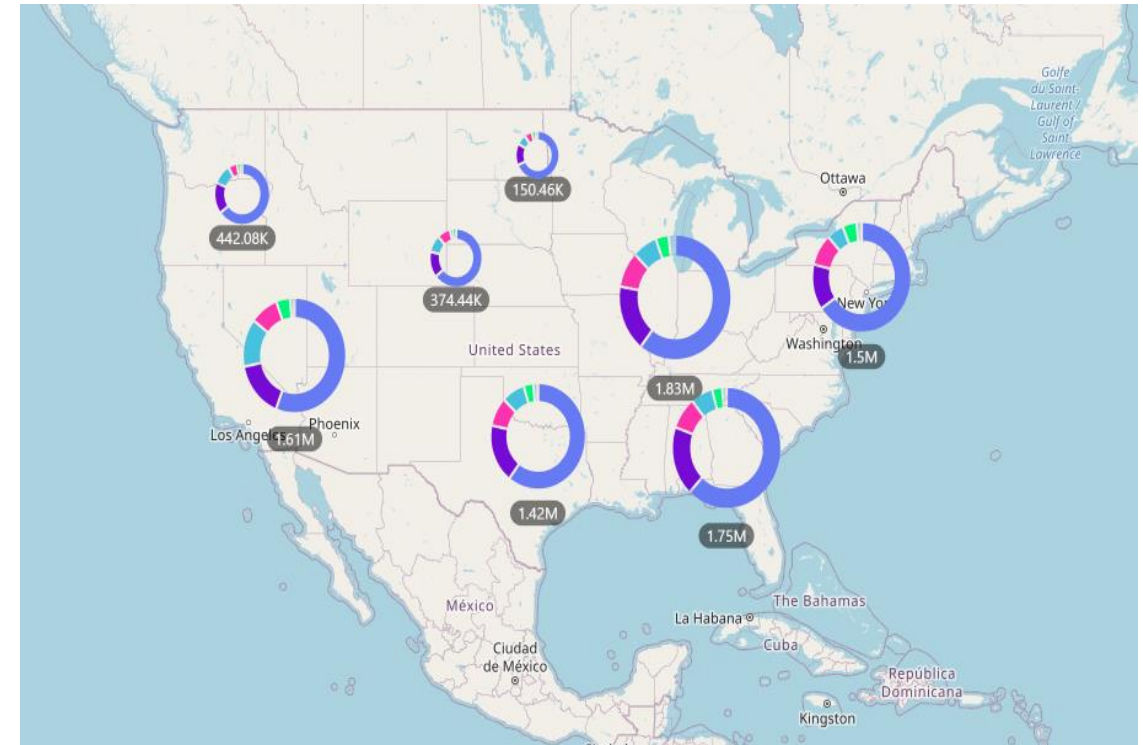
# Tree Map

- Tree maps display hierarchical data using nested rectangles
- Size and color of each rectangle represent different attributes



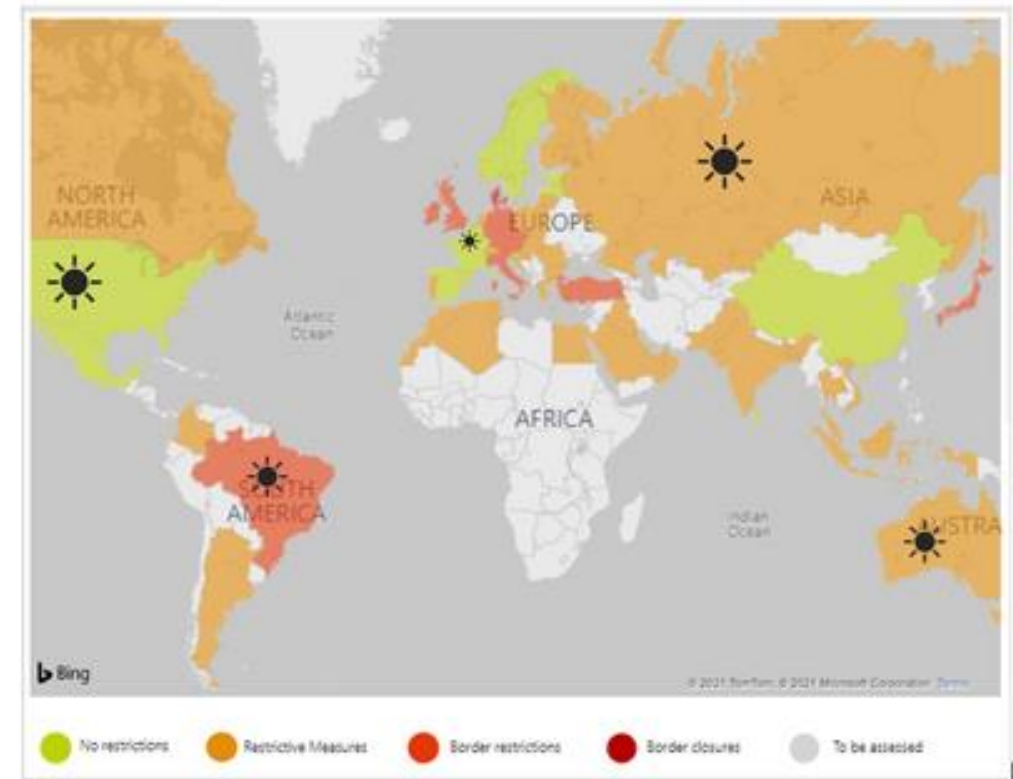
# Map

- Maps display data on a geographic layout
- Useful for visualizing data based on location or region



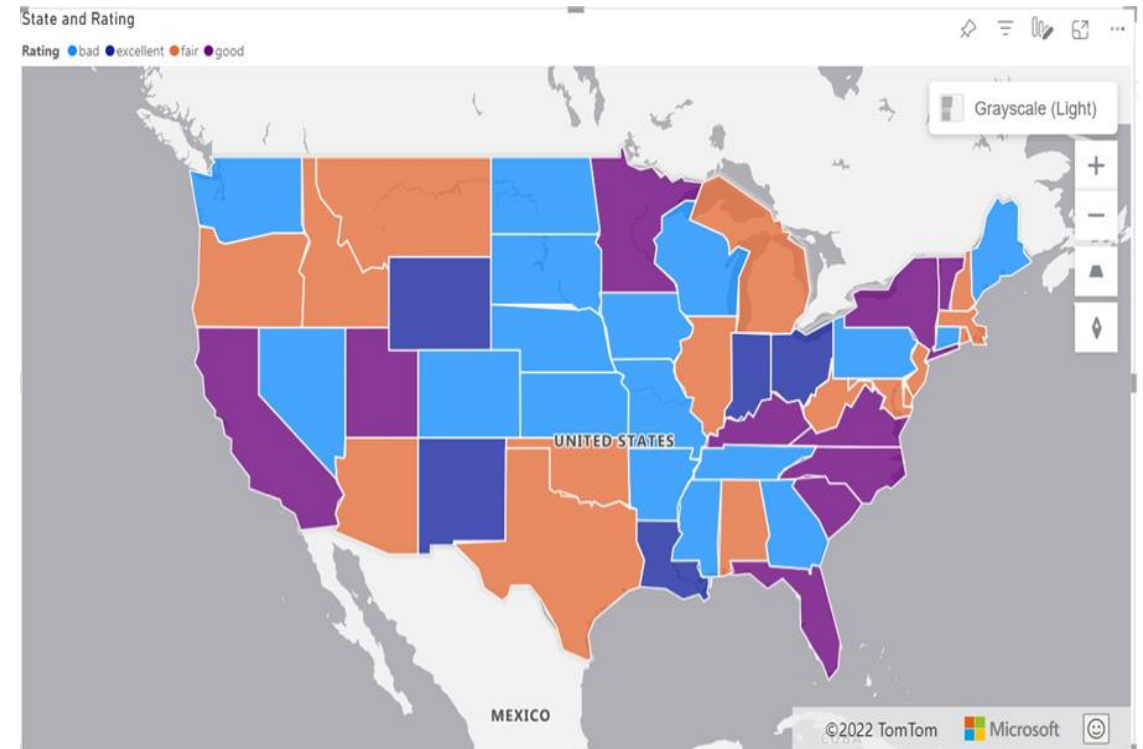
# Filled Map

- Filled maps use color intensity to represent data values
- Ideal for illustrating data with a wide range of values



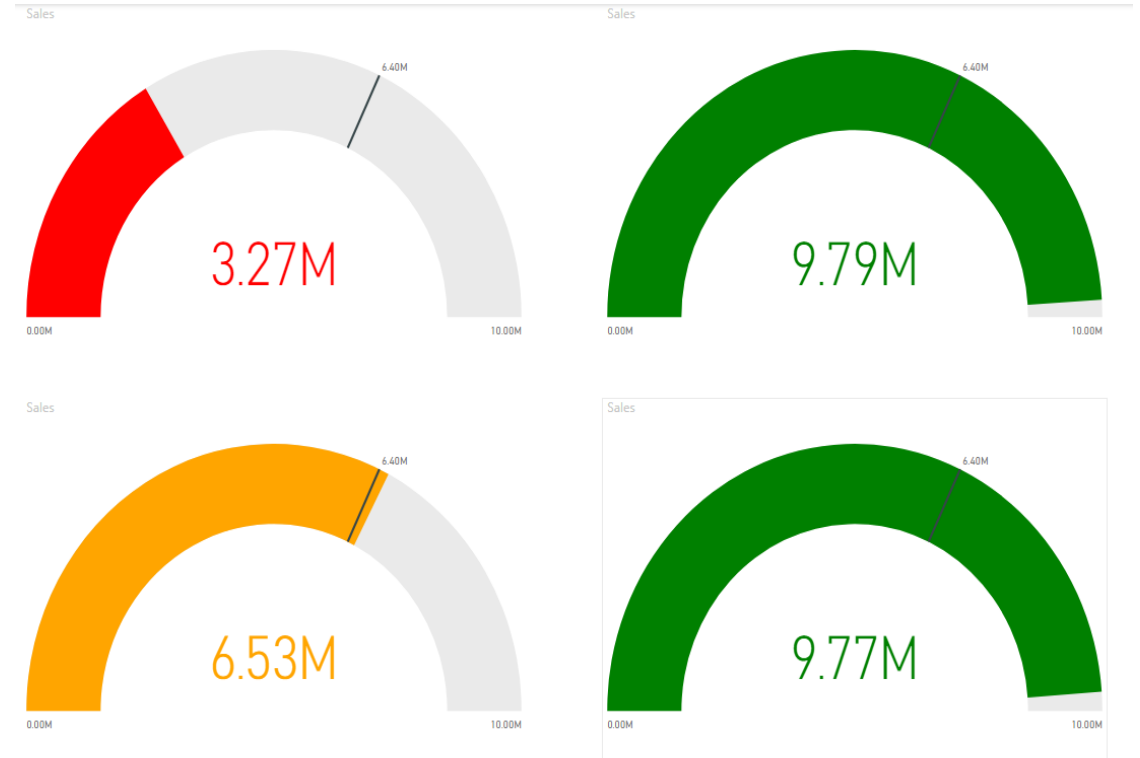
# Azure Map

- Azure Maps integrate with Power BI for advanced mapping capabilities
- Provides geolocation, routing, and spatial analytics



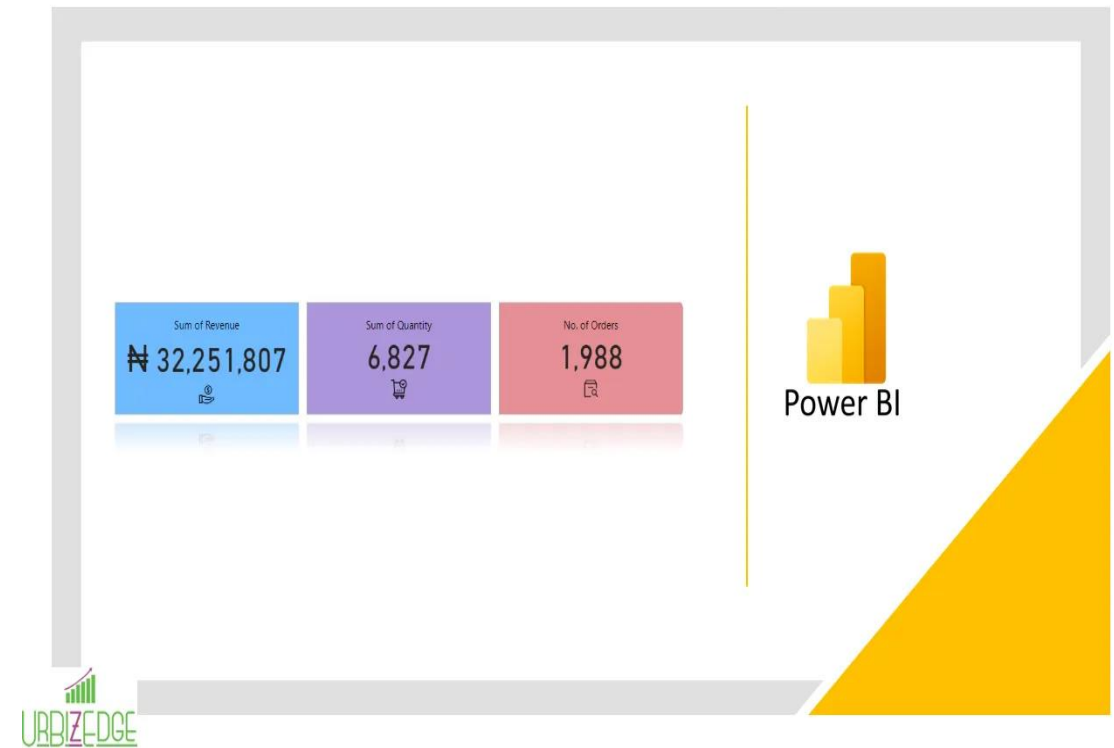
# Gauge

- Gauges display a single value within a range
- Great for representing metric or KPI values



# Card

- Card chart is used to display a single data point.
- It is useful for showing key performance indicators (KPIs) or summary information.





# Multi Row Card

- Multi Row Card chart is used to display multiple data points in a tabular format.
- It can be used to present detailed information or data tables.



# KPI

- KPI chart is used to measure and monitor key performance indicators.
- It provides a visual representation of business metrics and helps in tracking progress towards goals.

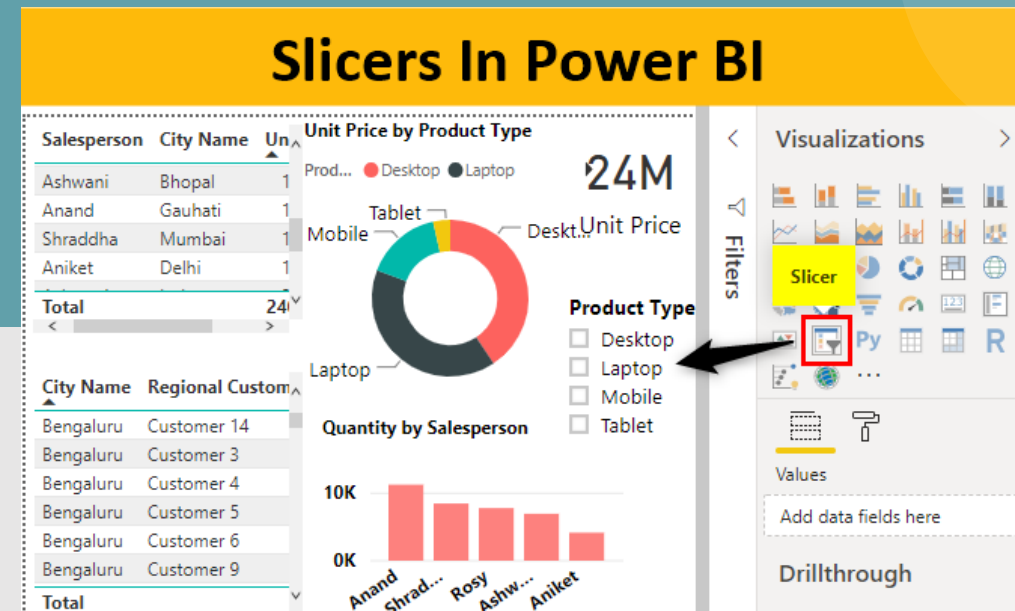
## Overall Margin %

53.00%

| Year                          | 2007     |        |       | 2008     |        |       | 2009     |        |       |
|-------------------------------|----------|--------|-------|----------|--------|-------|----------|--------|-------|
| Category Name                 | Margin % | Status | Trend | Margin % | Status | Trend | Margin % | Status | Trend |
| Audio                         | 48.90%   | 🔴      | ↗     | 53.95%   | 🟡      | ↗     | 52.03%   | 🟡      | ↘     |
| Cameras and camcorders        | 59.95%   | 🟢      | ↘     | 56.22%   | 🟢      | ↘     | 55.38%   | 🟢      | ↘     |
| Cell phones                   | 51.02%   | 🟡      | ↘     | 51.31%   | 🟡      | ↘     | 51.10%   | 🟡      | ↘     |
| Computers                     | 52.49%   | 🟡      | ↘     | 52.40%   | 🟡      | ↘     | 53.07%   | 🟡      | ↗     |
| Games and Toys                | 52.18%   | 🟡      | ↘     | 50.00%   | 🔴      | ↘     | 47.30%   | 🔴      | ↘     |
| Home Appliances               | 50.64%   | 🔴      | ↗     | 51.10%   | 🟡      | ↗     | 52.19%   | 🟡      | ↗     |
| Music, Movies and Audio Books | 57.61%   | 🟢      | ↘     | 57.55%   | 🟢      | ↘     | 55.61%   | 🟢      | ↘     |
| TV and Video                  | 49.47%   | 🔴      | ↗     | 50.65%   | 🔴      | ↗     | 51.06%   | 🟡      | ↗     |

# Slicer

- Slicer is used to filter data and analyze specific subsets of information.
- It provides an interactive way to explore and navigate data.



# Table

- Table chart allows you to present data in a tabular format with rows and columns.
- It is useful for displaying detailed information or comparing multiple data points.

| Category        | This Year Sales Status | Average Unit Price Last Year | Last Year Sales     | This Year Sales     | This Year Sales Goal |
|-----------------|------------------------|------------------------------|---------------------|---------------------|----------------------|
| 010-Womens      | ●                      | \$6.70                       | \$2,680,662         | \$1,787,958         | \$2,680,662          |
| 020-Mens        | ●                      | \$6.89                       | \$4,453,133         | \$4,452,421         | \$4,453,133          |
| 030-Kids        | ●                      | \$5.20                       | \$2,726,892         | \$2,705,490         | \$2,726,892          |
| 040-Juniors     | ●                      | \$7.06                       | \$3,105,550         | \$2,930,385         | \$3,105,550          |
| 050-Shoes       | ●                      | \$13.73                      | \$3,640,471         | \$3,574,900         | \$3,640,471          |
| 060-Intimate    | ●                      | \$4.02                       | \$955,370           | \$852,329           | \$955,370            |
| 070-Hosiery     | ●                      | \$3.57                       | \$573,604           | \$486,106           | \$573,604            |
| 080-Accessories | ●                      | \$4.22                       | \$1,273,096         | \$1,379,259         | \$1,273,096          |
| 090-Home        | ●                      | \$3.28                       | \$2,913,647         | \$3,053,326         | \$2,913,647          |
| 100-Groceries   | ●                      | \$1.36                       | \$810,176           | \$829,776           | \$810,176            |
| <b>Total</b>    | ●                      | <b>\$5.19</b>                | <b>\$23,132,601</b> | <b>\$22,051,952</b> | <b>\$23,132,601</b>  |

# Matrix

- Matrix chart provides pivot table-like functionality in Power BI.
- It allows you to aggregate, summarize, and analyze data based on multiple dimensions.

| Region          | Central     |                   | East                 |                   | West                 |                   | Total                |                   |
|-----------------|-------------|-------------------|----------------------|-------------------|----------------------|-------------------|----------------------|-------------------|
|                 | Sales Stage | Opportunity Count | Revenue              | Opportunity Count | Revenue              | Opportunity Count | Revenue              | Opportunity Count |
| <b>Lead</b>     |             |                   |                      |                   |                      |                   |                      |                   |
| Small           |             | 26                | \$22,907,676         | 38                | \$47,428,906         | 11                | \$11,889,018         | 75                |
| Medium          |             | 25                | \$96,249,147         | 30                | \$116,539,256        | 18                | \$72,871,697         | 73                |
| Large           |             | 40                | \$321,876,492        | 33                | \$255,568,275        | 18                | \$149,636,713        | 91                |
| <b>Total</b>    |             | <b>91</b>         | <b>\$441,033,315</b> | <b>101</b>        | <b>\$419,536,437</b> | <b>47</b>         | <b>\$234,397,428</b> | <b>239</b>        |
| <b>Qualify</b>  |             |                   |                      |                   |                      |                   |                      |                   |
| Small           |             | 10                | \$11,550,016         | 19                | \$23,925,214         | 5                 | \$5,695,989          | 34                |
| Medium          |             | 12                | \$48,820,525         | 19                | \$71,617,016         | 8                 | \$33,018,968         | 39                |
| Large           |             | 7                 | \$51,344,920         | 12                | \$100,149,924        | 2                 | \$13,727,406         | 21                |
| <b>Total</b>    |             | <b>29</b>         | <b>\$111,715,461</b> | <b>50</b>         | <b>\$195,692,154</b> | <b>15</b>         | <b>\$52,442,363</b>  | <b>94</b>         |
| <b>Solution</b> |             |                   |                      |                   |                      |                   |                      |                   |
| Small           |             | 13                | \$13,771,741         | 8                 | \$10,283,935         | 7                 | \$7,155,493          | 28                |
| Medium          |             | 9                 | \$38,048,946         | 13                | \$54,729,272         | 4                 | \$16,363,417         | 26                |
| Large           |             | 7                 | \$48,923,102         | 9                 | \$69,333,963         | 4                 | \$29,922,591         | 20                |
| <b>Total</b>    |             | <b>29</b>         | <b>\$100,743,789</b> | <b>30</b>         | <b>\$134,347,170</b> | <b>15</b>         | <b>\$53,441,501</b>  | <b>74</b>         |
| <b>Proposal</b> |             |                   |                      |                   |                      |                   |                      |                   |
| Small           |             | 8                 | \$13,095,186         | 3                 | \$4,770,862          | 3                 | \$3,720,287          | 14                |
| Medium          |             | 4                 | \$15,283,161         | 6                 | \$25,607,581         | 5                 | \$21,456,937         | 15                |
| Large           |             | 2                 | \$18,344,522         | 4                 | \$29,592,481         | 2                 | \$17,855,445         | 8                 |
| <b>Total</b>    |             | <b>14</b>         | <b>\$46,722,869</b>  | <b>13</b>         | <b>\$59,970,924</b>  | <b>10</b>         | <b>\$43,032,669</b>  | <b>37</b>         |
| <b>Finalize</b> |             |                   |                      |                   |                      |                   |                      |                   |
| Small           |             | 1                 | \$1,788,307          | 1                 | \$1,693,585          |                   |                      | 2                 |
| Medium          |             | 2                 | \$8,974,009          |                   |                      | 2                 | \$7,926,517          | 4                 |
| Large           |             | 2                 | \$12,539,930         | 4                 | \$29,002,843         | 2                 | \$13,249,668         | 8                 |
| <b>Total</b>    |             | <b>5</b>          | <b>\$23,302,246</b>  | <b>5</b>          | <b>\$30,696,428</b>  | <b>4</b>          | <b>\$21,176,185</b>  | <b>14</b>         |
| <b>Total</b>    |             | <b>168</b>        | <b>\$723,517,680</b> | <b>199</b>        | <b>\$840,243,113</b> | <b>91</b>         | <b>\$404,490,146</b> | <b>458</b>        |

# Key Influencers

- Key Influencers chart helps you identify the factors that have the most impact on an outcome.
- It uses machine learning algorithms to analyze data and determine the significant contributors.

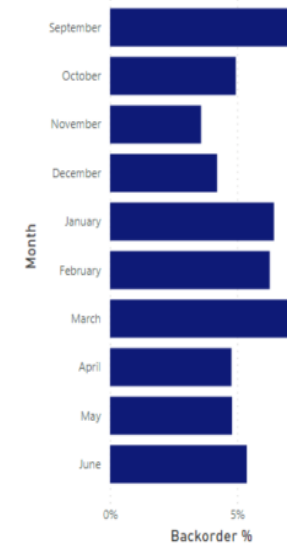


# Decomposition Tree

- Decomposition tree is a powerful visualization tool in Power BI that allows users to explore hierarchical data in a structured manner
- It presents data in a tree-like structure, with each branch representing a category or attribute
- Users can easily drill down into the data, analyze different levels of granularity, and identify patterns and trends

## Root Cause Analysis

Average of Backorder % by Month



High Risk

Low Risk



# Smart Narrative

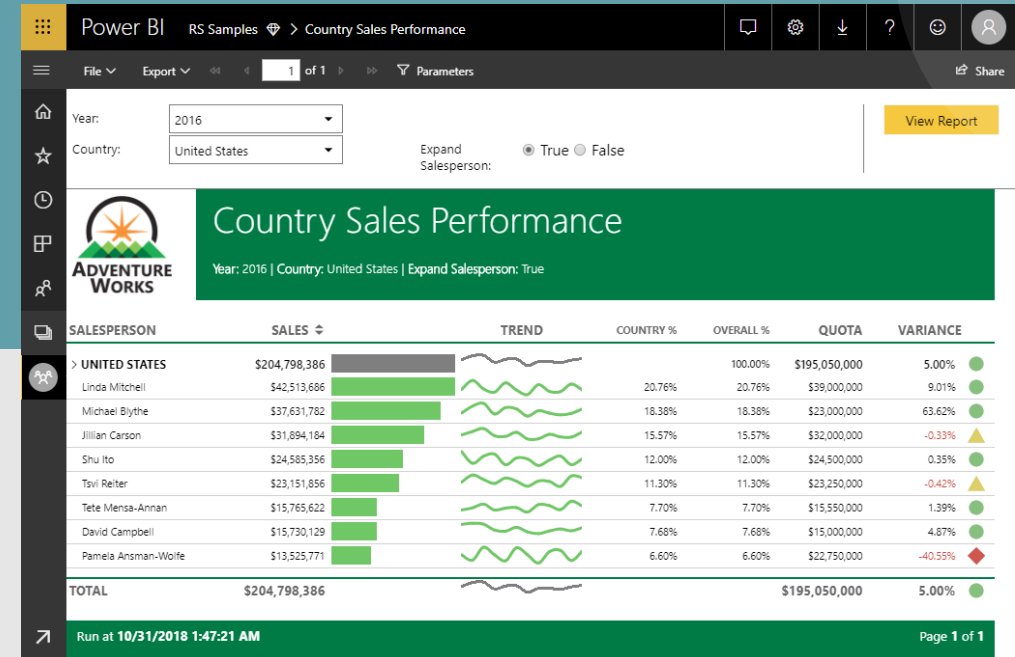
- Smart narrative is a feature in Power BI that automatically generates insights and explanations in natural language
- It helps users understand trends, patterns, and anomalies in the data by providing clear and concise explanations
- By using machine learning algorithms, Power BI can analyze data and write summaries in plain language





# Paginated Report

- Paginated reports offer a way to create and distribute highly formatted, pixel-perfect reports
- They are ideal for printing or generating PDFs and can be used to design invoices, sales reports, and other documents
- With features like tables, matrices, charts, and images, paginated reports provide a powerful tool for presenting data in a visually appealing manner



# Thank You



@mitu\_skillologies



/miTuSkillologies



@mitu\_group



/company/mitu-skillologies



MITUSkillologies

kaggle

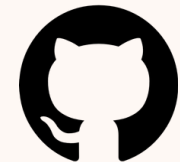
@mituskillologies

## Web Resources

<https://mitu.co.in>

<http://tusharkute.com>

[contact@mitu.co.in](mailto:contact@mitu.co.in)  
[tushar@tusharkute.com](mailto:tushar@tusharkute.com)



@mituskillologies