Which Chart When?

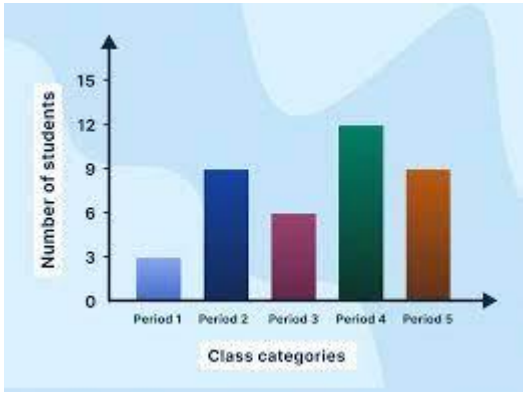
1.Bar chart

Type of data: Categorical, quantitative

When to use it: Use a bar chart to compare data across categories.

What it shows: Bar charts display data using rectangular bars, with the length of the bar representing the value. The bars can be horizontal or vertical

When to avoid it: Avoid using a bar chart when there are too many categories or if the data is continuous



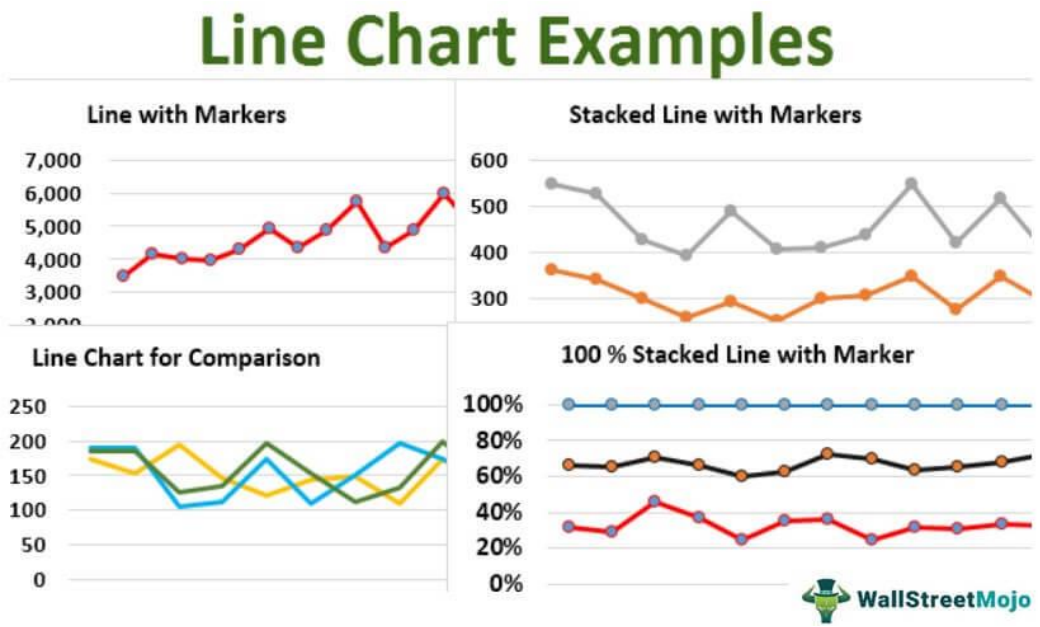
2.Line Chart

Type of data: Continuous, time-series

When to use it: Use a line chart to show trends over time.

What it shows: Line charts plot data points connected by lines. The X-axis usually represents time, and the Y-axis represents the value.

When to avoid it: Only use a line chart when there is a logical order or relationship between data points.



3.Donut Chart

Type of data: Categorical, proportional

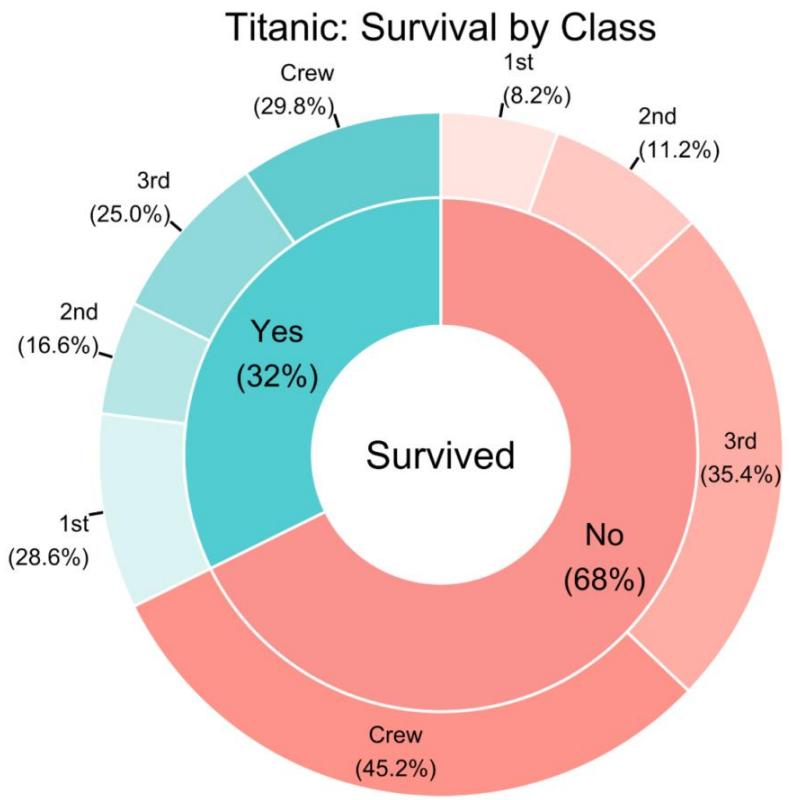
When to use it: Use a donut chart to show the proportion of each category.

What it shows: Donut charts represent

data as slices of a circle, each

representing a percentage of the total.

When to avoid it: Avoid using donut charts when there are too many categories or comparing data across groups



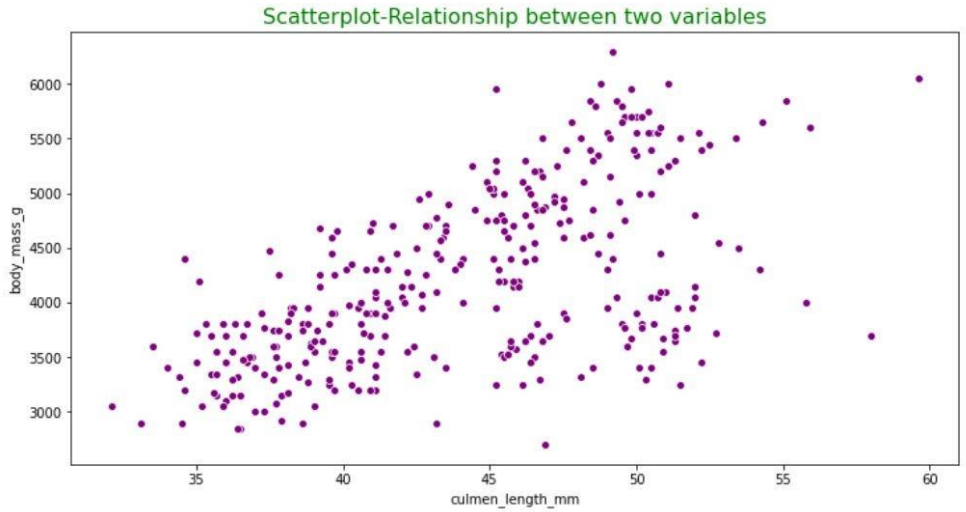
4.Scatter plot

Type of data: Continuous, bivariate

When to use it: Use a scatterplot to display the relationship between two variables.

What it shows: Scatterplots plot data points on a two-dimensional plane, with one variable on the X-axis and the other on the Y-axis.

When to avoid it: Don't use a scatterplot when the relationship between variables is irrelevant or when comparing multiple categories



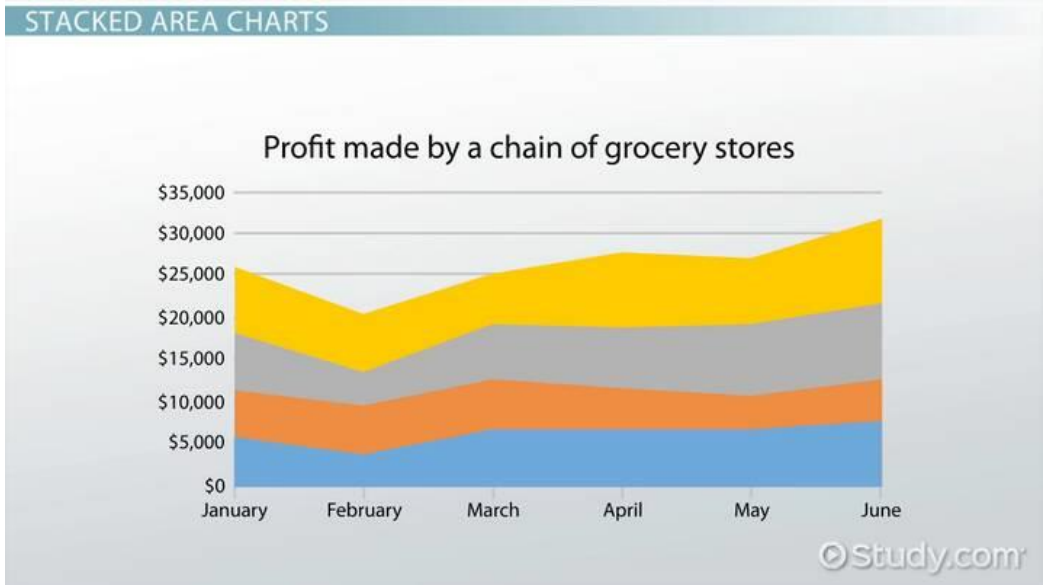
5 .Area Chart

Type of data: Continuous, time-series

When to use it: Use an area chart to show the volume or magnitude of data over time.

What it shows: Area charts are similar to line charts, but the area between the line and the X-axis is filled, emphasizing the volume or magnitude.

When to avoid it: Avoid using an area chart with multiple data series with overlapping areas, as it can be confusing.



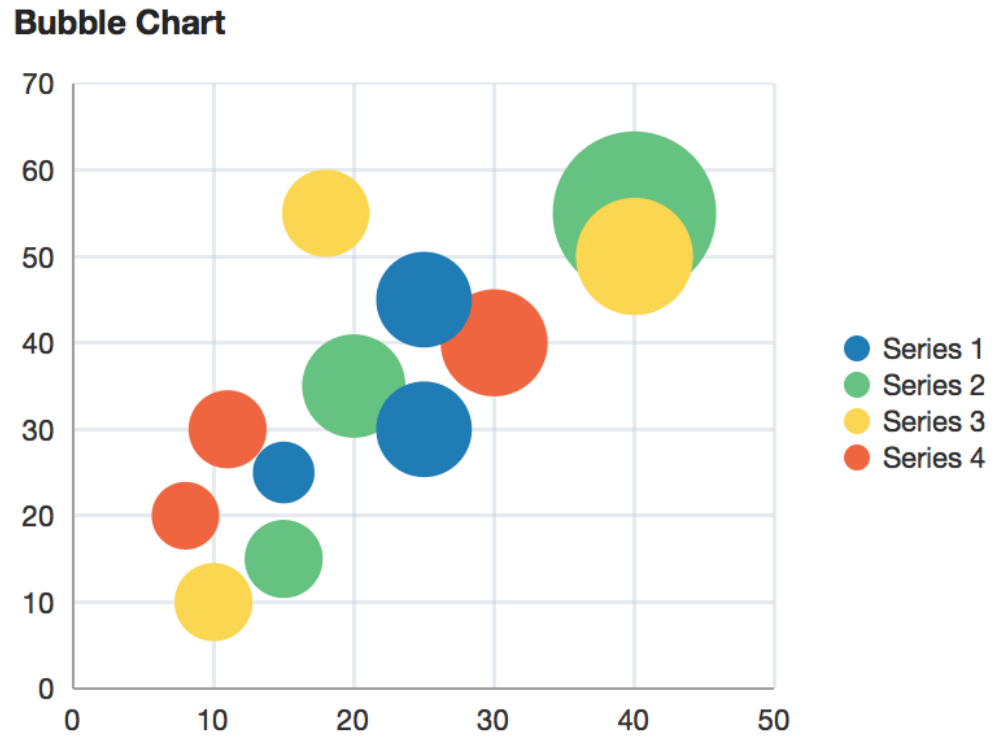
6.Bubble Chart

Type of data: Continuous, multivariate

When to use it: Use a bubble chart to display the relationship between three variables.

What it shows: Bubble charts are a variation of scatterplots, with the size of the bubbles representing the third variable.

When to avoid it: Don't use a bubble chart when the size of the bubbles is not meaningful or when comparing multiple categories.



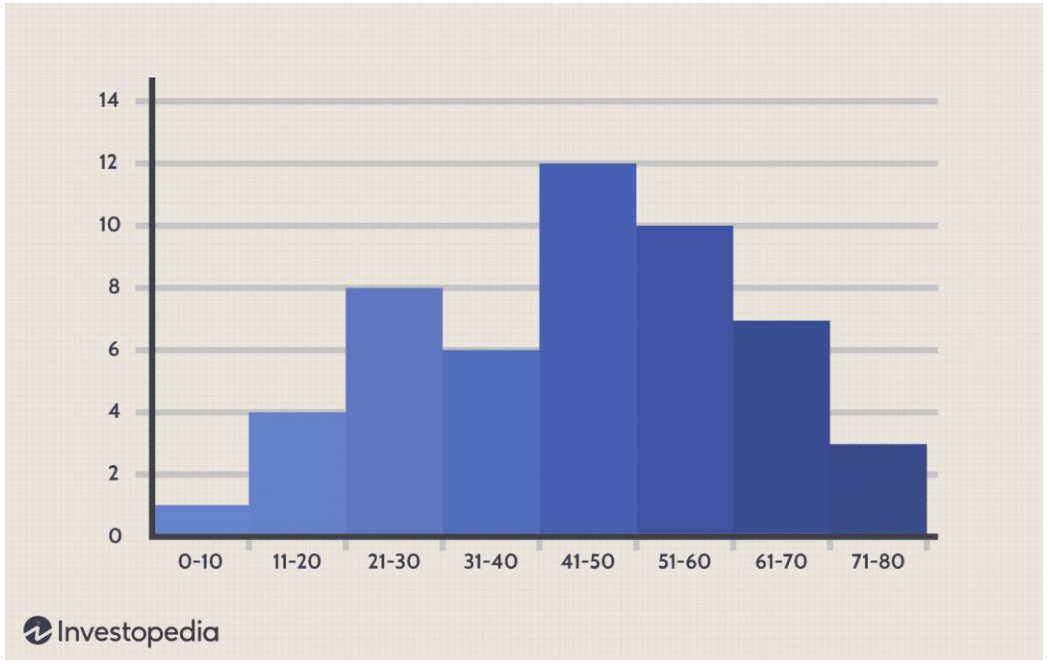
7.Histogram

Type of data: Continuous, univariate

When to use it: Use a histogram to display the data distribution.

What it shows: Histograms are similar to bar charts, but the data is divided into equal intervals, and the bar's height represents the data frequency in each interval.

When to avoid it: Avoid using histograms when the data is categorical or comparing data across groups.



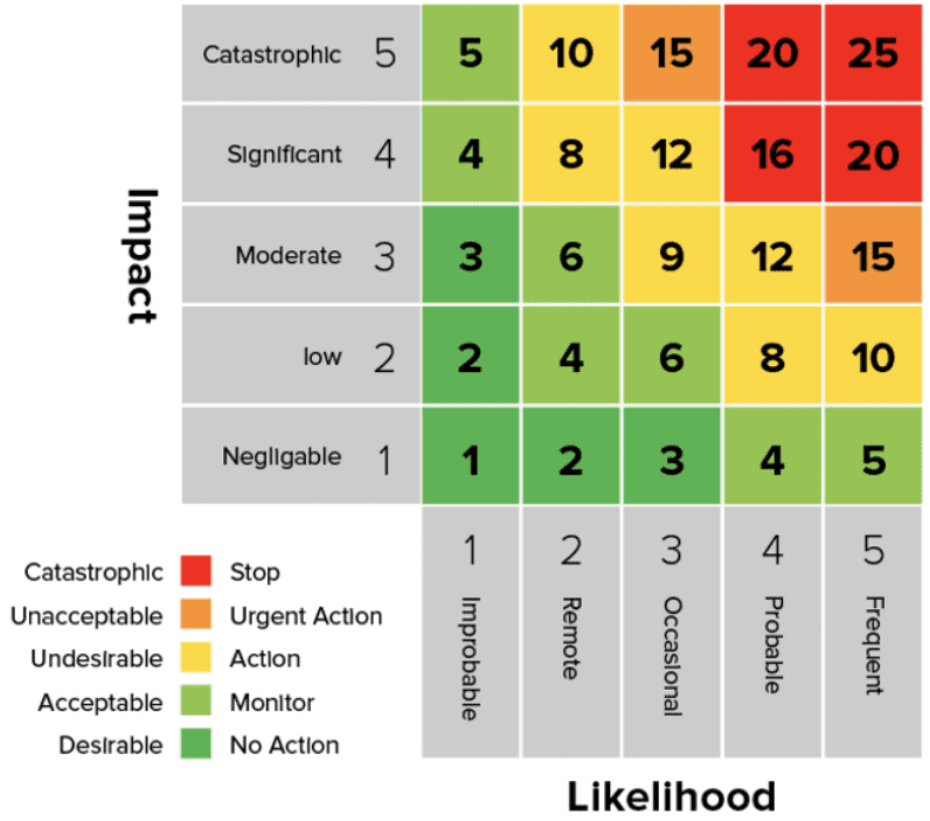
8. Heatmap

Type of data: Continuous, multivariate

When to use it: Use a heatmap to display the relationship between two variables using color intensity.

What it shows: Heatmaps use a color scale to represent the value of each cell in a matrix, with one variable on the X-axis and the other on the Y-axis. Darker colors indicate higher values, while lighter colors represent lower values.

When to avoid it: Don't use a heatmap when the relationship between variables is irrelevant, when the data is categorical, or when comparing multiple categories.



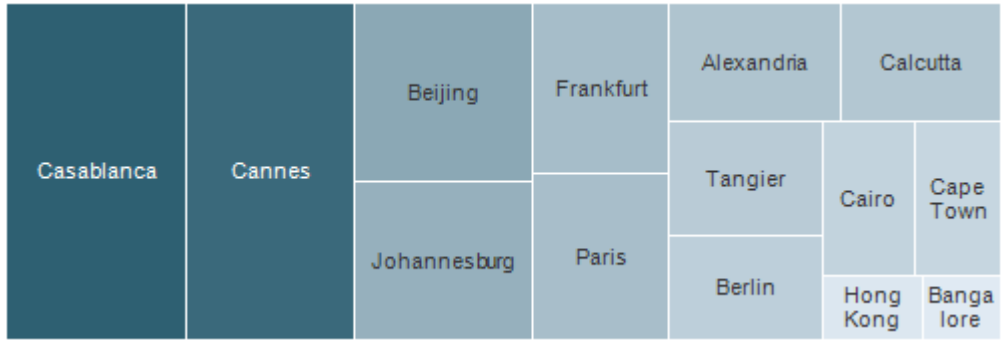
9.Treemap

Type of data: Categorical, hierarchical

When to use it: Use a treemap to display hierarchical data or to show the proportion of each category as a whole.

What it shows: Treemaps use nested rectangles to represent data, with the size of each rectangle proportional to its value. Color can be used to indicate additional information.

When to avoid it: Avoid using treemaps when there are too many categories or the data is not hierarchical



10.Radar Chart

Type of data: Continuous, multivariate

When to use it: Use a radar chart to display the performance or characteristics of different categories across multiple dimensions.

What it shows: Radar charts use a circular layout with multiple axes, each representing a dimension. Data points are plotted on each axis and connected to form a shape.

When to avoid it: Don't use a radar chart when there are only a few dimensions or when comparing data across groups.