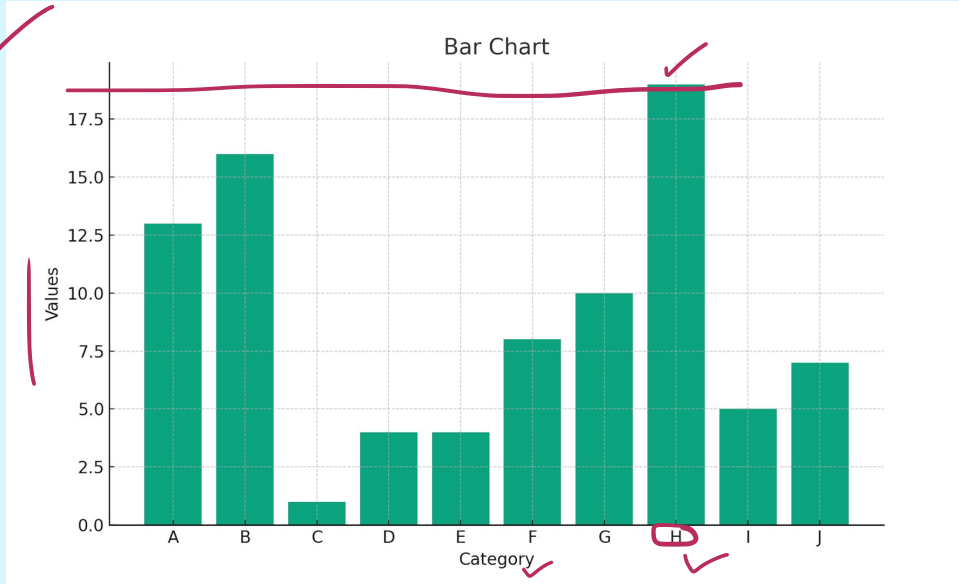
Data Visualization Methods

An overview of different data visualization methods and their uses

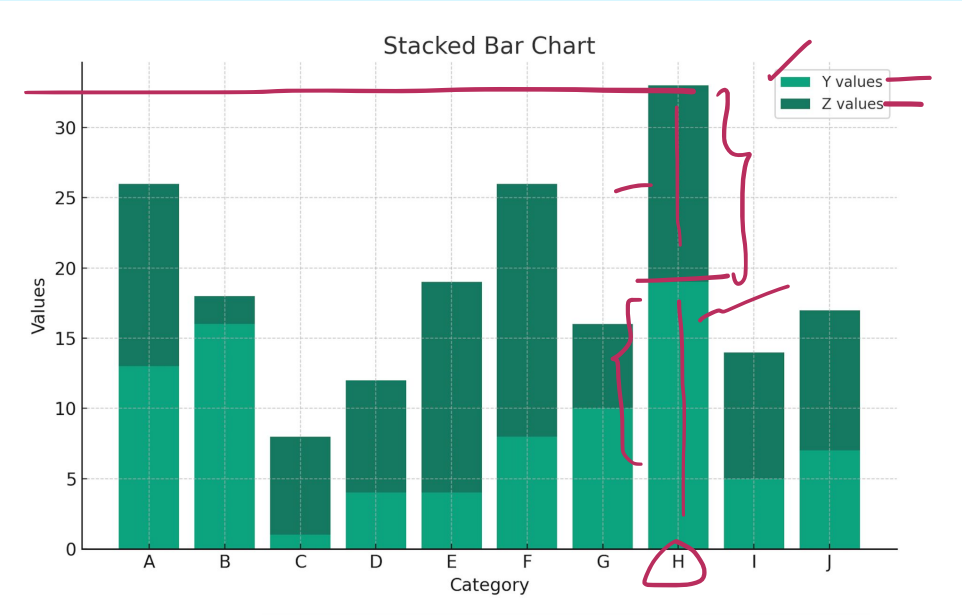
Bar Charts

- Used to compare quantities across different categories
- Each category is represented by a bar, with the length or height of the bar corresponding to its value



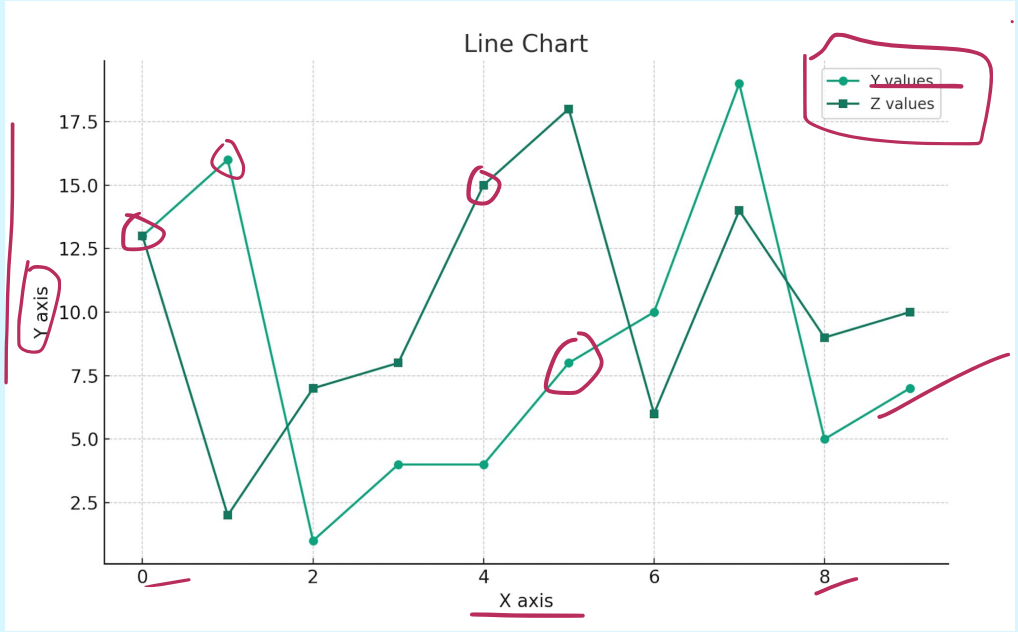
Stacked Bar Charts

- Allows comparison of the total amounts across different groups
- Illustrates the composition of those totals out of different sub-categories within those groups



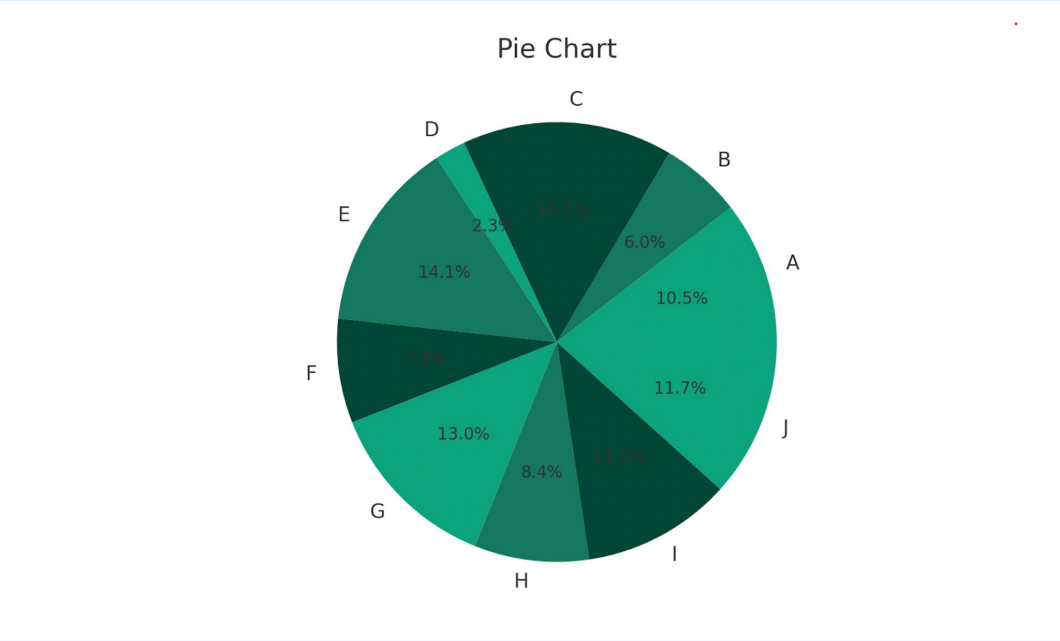
Line Graph

- Ideal for showing trends over time
- Points are plotted on the graph to represent data points, and these points are connected by lines to show changes in the data over time



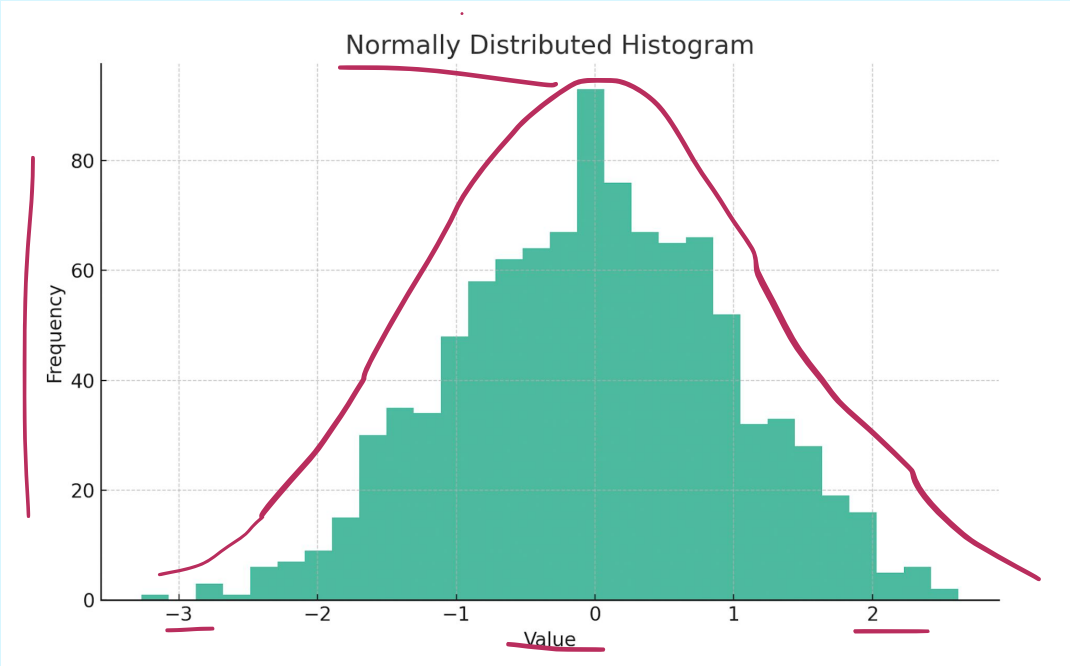
Pie Chart

- A circle is divided into slices to illustrate the numerical proportion of each category
- Useful for showing proportions or percentages



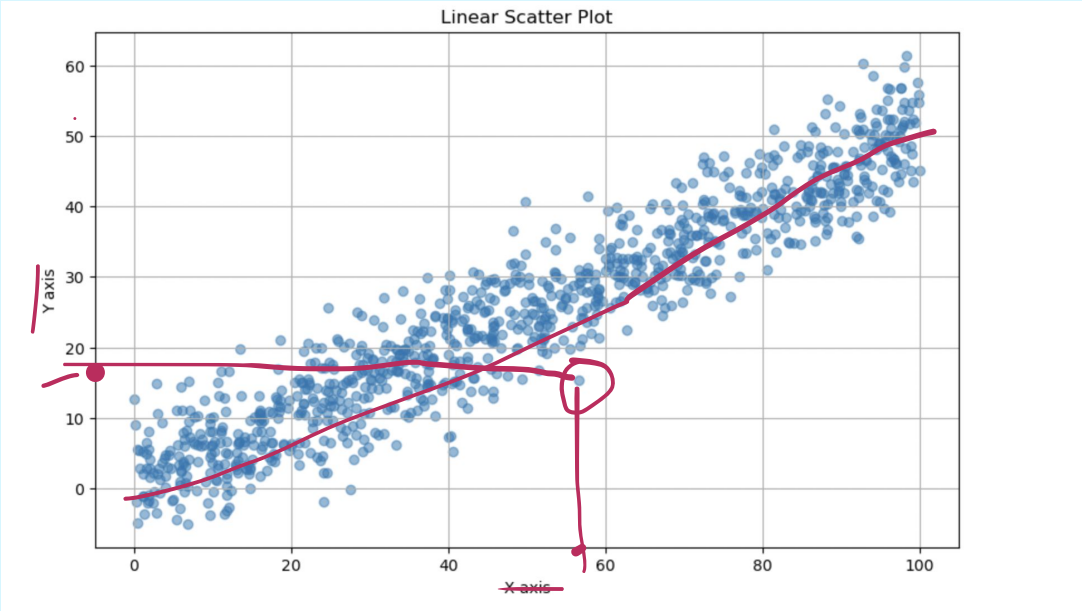
Histogram

- Particularly useful for understanding the distribution of a variable and identifying outliers or patterns
- Used for showing the distribution of a dataset



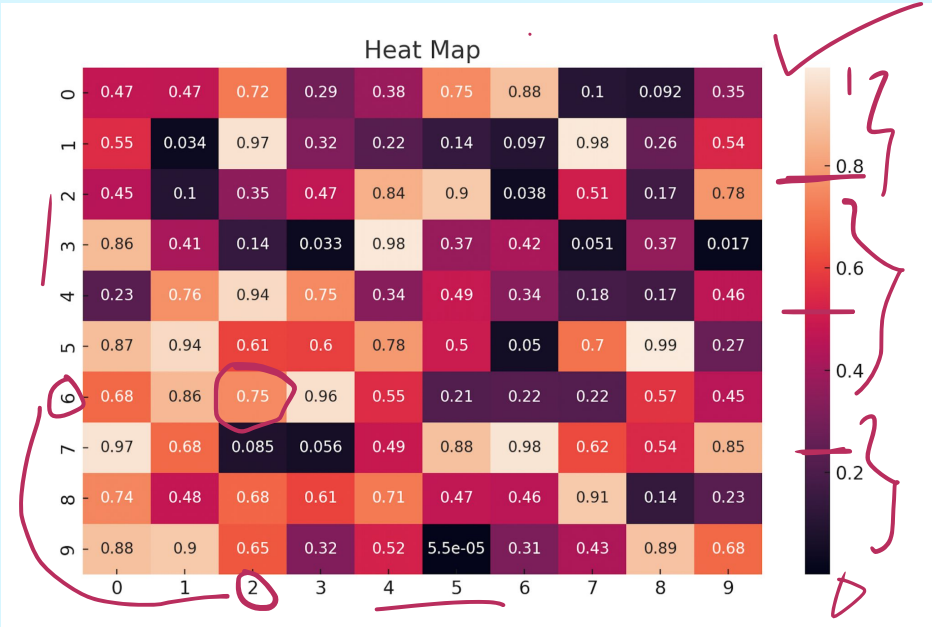
Scatter Plot

- Used to show the relationship between two variables
- Each point on the plot corresponds to one data point in the dataset, with the position determined by the values of the two variables



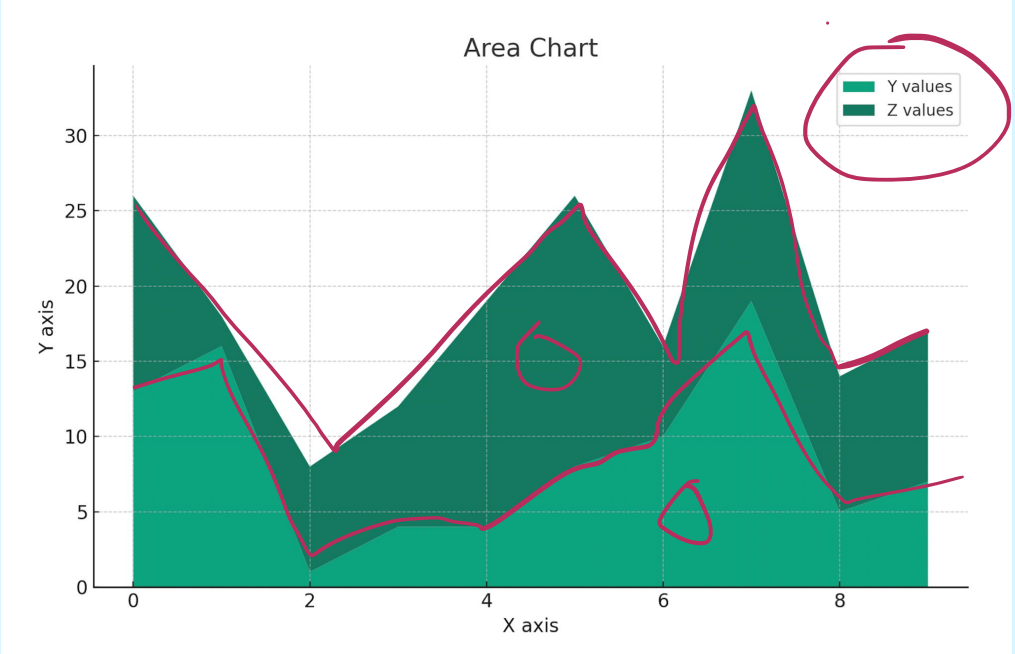
Heat Map

- Shows magnitude of a phenomenon as color in two dimensions
- The variation in color may be by hue or intensity, giving visual cues to the reader about how the phenomenon is clustered or varies over space



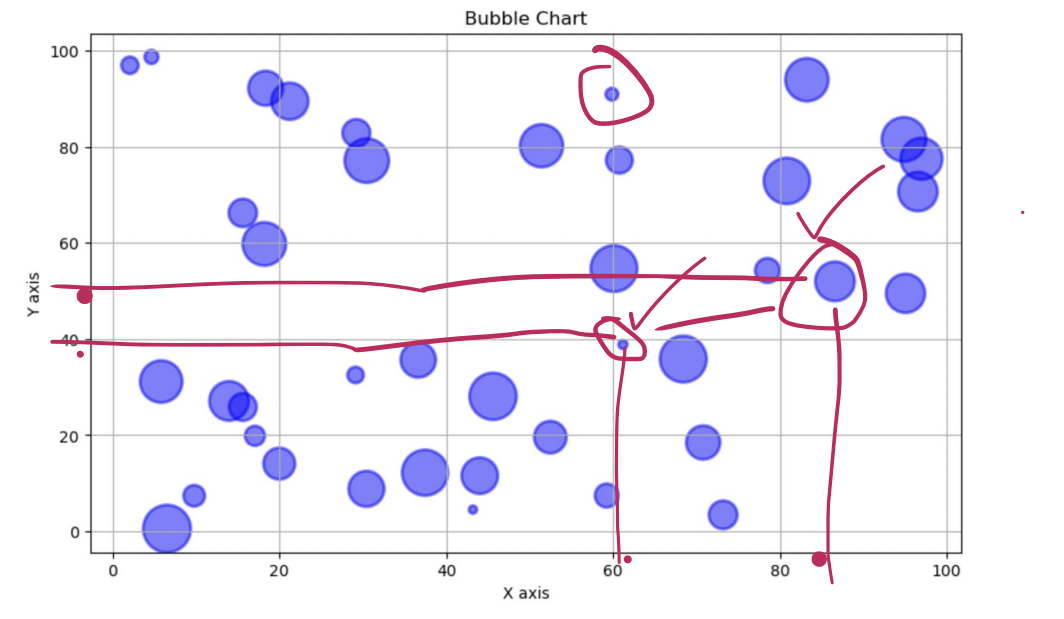
Area Chart

- Similar to line graphs but with the area below the line filled in
- Useful for illustrating the magnitude of change over time and can be used to show multiple quantities by stacking different areas



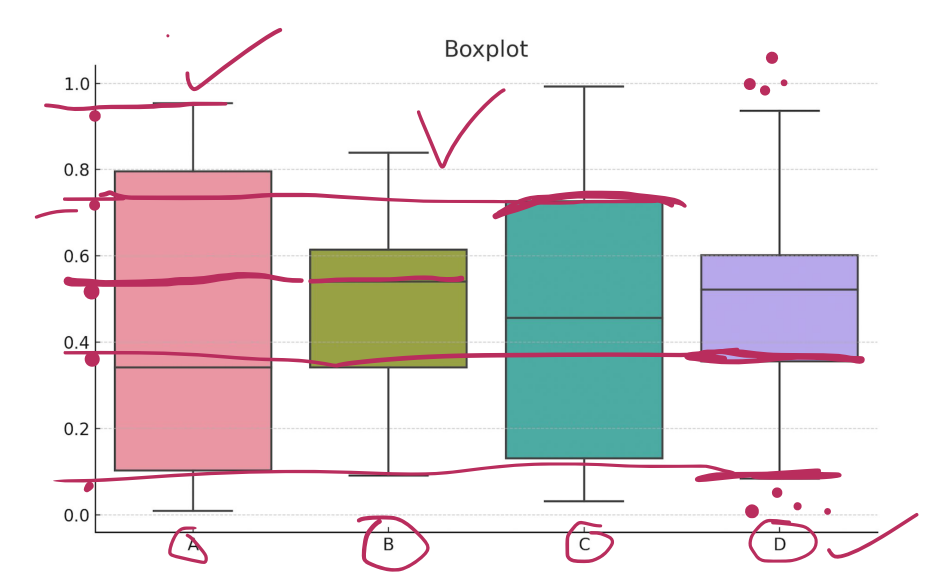
Bubble Plot

- A variation of the scatter plot
- Each data point is represented by a bubble, and the size of the bubble can represent an additional dimension of the data



Box Plot

- Show the distribution of quantitative data
- Facilitates comparisons between variables or across levels of a categorical variable
- The box shows the quartiles of the dataset while the whiskers extend to show the rest of the distribution, except for points that are determined to be 'outliers'



Thank you for your time and attention 🙂