



Scatter Diagrams

A scatter diagram graphs pairs of numeric data to visualize the relationship between two variables. It plots one variable on the x-axis and the other on the y-axis, with each data point positioned according to its x-y values.

Key elements of scatter diagrams:

- The x and y axes may represent time, but can also depict any quantifiable independent and dependent variables.
- Proximity of the data points to a diagonal line indicates the strength of correlation.
- The slope of the line signals positive or negative correlation.

Scatter diagrams help identify patterns including:

- Positive correlation - rising diagonal line shows direct relationship between x and y
- Negative correlation - falling diagonal line shows inverse relationship
- No correlation - scattered random points show no relationship between x and y
- Non-linear correlation - data points form a curved relationship

Benefits of scatter diagrams:

- Visualize correlations between data variables
- Assess strength and direction of relationships
- Identify outliers and strange patterns
- Simplify large datasets to show meaningful relationships
- Help select useful input variables for predictive models
- Determine inputs to optimize desired outputs

Scatter plots provide an easy visualization for identifying correlations within data that might go unnoticed in tabular formats. They turn numbers into intuitive information.