Scatter Plot

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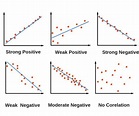
Introduction

The type of graph that displayed the relationship between two variables. It shows the relationships and patterns in data that are represented on the graph.

This is a plot of X-axis AND Y-axis coordinates, presented in the plot on a graph as (x,y).

The two types of scatter plots are two-dimensional (2D) and three-dimensional (3D). As the names indicate, a 2D scatter plot has coordinates on a two-dimensional graph with an x- and y-axis.

A 3D scatter plot uses a three-dimensional grid system incorporating a z-axis to show additional features like scale, product size, or price.



Summary

Scatter plots are a practical tool for visualizing the relationship between variables, particularly when you're seeking trends and making predictions. Consider a scenario where you're exploring the link between sugar consumption and weight. By plotting this data on a scatter plot, with one axis representing the amount of sugar each person consumed during a specific time and the other axis indicating the pounds gained or lost during that time, you can easily see the correlation.

Representing the data in this format helps you analyze it. You can see how the different data points relate to each other.

Description of scatter plot deliverable

Scatter plots are more useful when working with paired numerical data and examining only two variables.

**Scatter plots are not limited to one field of study. In fact, they can be used in a multitude of scenarios. For instance, a human resources director may use a scatter plot to explore the connection between employees' salary and their sense of job satisfaction. After administering a job satisfaction survey, they could plot the survey results along with the salary of each participating employee and look for the connection between the two. This example demonstrates the versatility of scatter plots and how they can be applied in different contexts, inspiring you to explore their potential in your own field.**

Description of materials

For those of you who work with numbers, economists, project managers, and scientists' plots are powerful tools in your arsenal. As a data analyst, market analyst, or researcher, you could identify trends and predict how people will behave using scatter plots. This practical application of scatter plots in data analysis empowers you to draw insightful conclusions and make accurate predictions.

Pros and cons of using scatter plots.

Scatter plots, with their straightforward design, are a breeze to interpret. A mere glance can often reveal a correlation.

Scatter plots can show non-linear relationships. Some data may show up along a curved line or an irregular formation.

Scatter plots are easy to create. You can draw one by hand or create one using a computer program like Excel.

Scatter plots identify correlation. Knowing the relationship between the variables is a starting point for additional analysis.

Scatter plots allow for limited analysis. You can use a scatter plot to visualize two—and sometimes three-variables; therefore, you need another method for additional analysis.

Scatter plots do not indicate causation. Correlation is not the same as causation—two variables can be positively or negatively related and caused by additional variables that may not be indicated on the scatter plot.

Scatter plots with too many data points may be difficult to read. Overlapping data can dilute the data and slow the analysis process.



You can manually draw a scatter plot or create one in a program like Excel, Tableau, and Canva. How do you use a scatter plot? Drawing one by hand can help you understand how it works. To start, gather your data and record it in a two-column chart. If you want to create the scatter plot by hand, draw a graph and assign a variable to the x-axis and the y-axis. For each data set, place a dot on the spot where the two values intersect on the graph.

Heat Temperature

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|  | 27 |  | 22 | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | | Temperature vs Heat | | | | | |  | |  | |  | |
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| Scatter plot between Heat and Temperature | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | | | | | | | | | | | | | | | | | |  | |
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* In conclusion, scatter plots are used to visually represent objects, as shown in the picture above.

References

* <https://www.coursera.org/articles/what-is-a-scatter-plot>
* https://www.cuemath.com/data/scatter-plot/