DS064-Statistics 2

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Different Types of Analytics in Statistics

Analytics types	Definition
1. Descriptive Analytics – **What happened?**	It tells us what happened in the past and helps businesses understand how they are performing by providing context to help stakeholders interpret data.
2. Diagnostic Analytics – **Why did it happen?**	It goes beyond descriptive data to assist you in comprehending why something occurred in the past. (check correlation)
3. Predictive Analytics – **What is likely to happen?**	It forecasts what is likely to happen in the future and provides businesses with data-driven actionable insights. (Statistics is a building block of data science)
4. Prescriptive Analytics – **What should be done ?**	It makes recommendations for actions that will capitalise on the predictions and guide the potential actions toward a solution. Prescriptive analytics is the final and most advanced level of analytics.

Diagnostic Analytics - Statistical Concepts for Data Scientists

4. Correlation - Multivariate Measures

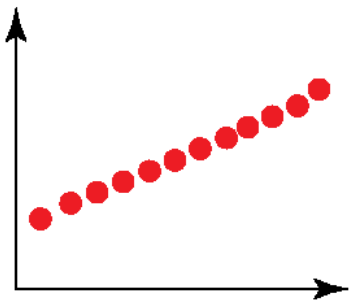
Correlation is a statistical method for determining whether or not two quantitative or categorical variables are related. To put it another way, it's a measure of how things are connected. Correlation measures the relationship between two variables and ranges from *-1 to 1*

Examples of data with a high correlation:

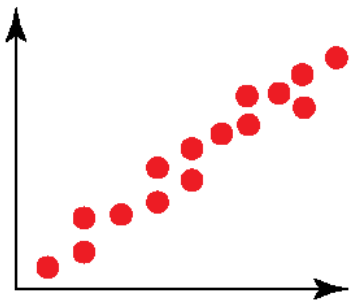
1. Your calorie consumption and weight.
2. Your eye colour and the eye colours of your relatives.

Examples of data with poor (or no) correlation:

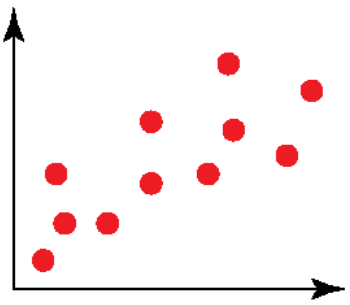
1. Your sexual preference and the cereal you eat are two factors to consider.
2. The name of a dog and the type of dog biscuit that they prefer.



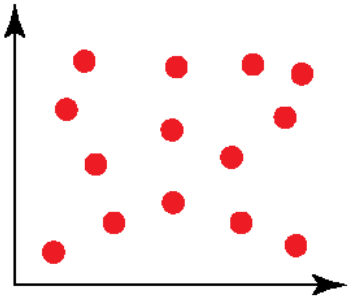
Perfect Positive Correlation



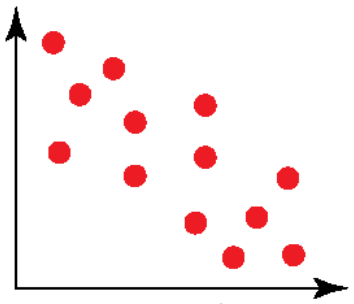
Strong Positive Correlation



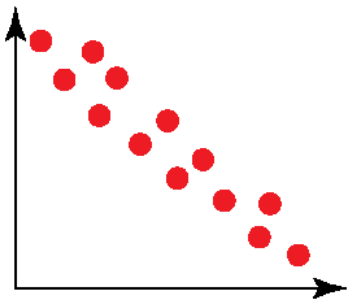
Weak Positive Correlation



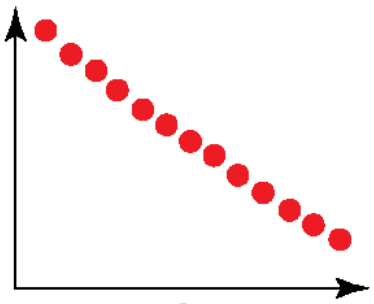
No Correlation



Weak Negative Correlation



Strong Negative Correlation



Perfect Negative Correlation

User-uploaded image: diksha-q-how-to-calculate-correlation-coefficient-01-1609233340.png

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Resources:

- https://www.w3schools.com/statistics/
- https://www.analyticsvidhya.com/blog/2021/10/end-to-end-statistics-for-data-science/
- https://www.kdnuggets.com/2020/06/8-basic-statistics-concepts.html
- https://hevodata.com/learn/statistics-for-data-analytics/
- https://makemeanalyst.com/basic-statistics-for-data-analysis/#Basic_Statistics