1. **Data Collection and Preparation:**

* Sourcing data from various channels:
* Databases
* Spreadsheets
* external sources
* Cleaning and organizing the data to ensure:
* it is accurate
* consistent
* and ready for analysis.

1. **Data Analysis:**

* Employing statistical methods, machine learning techniques, or other analytic tools to interpret data,
* Identifying trends, patterns, and correlations that might not be immediately obvious.

1. **Data Visualization and Storytelling:**

* Creating visual representations of the data
* Charts
* Graphs
* and dashboards, to make complex information easily understandable.
* Articulating findings in a compelling narrative to communicate the significance of the data to stakeholders.

1. **Decision Support:**

* Making recommendations based on data-driven insights to help guide business decisions,
* Providing context around the data, that includes:
* potential implications
* future trends.

**5. Collaboration and Communication:**

* Working closely with other departments, such as marketing, finance, and operations, to understand their data needs and provide insights,
* Effectively communicating complex data findings in a clear and concise manner to non-technical stakeholders,

**6. Continuous Learning and Adaptation:**

* Keeping up-to-date with the latest industry trends, tools, and technologies in data analysis.
* Adapting to new types of data and analytical methods as the organization's needs evolve.

Data analysis – process of analysing raw data so that we can pull out useful insights that will be used by business to make informed and smart business decisions.

Data analysis used for :

* To predict future sales or purchasing behaviours
* For security purposes ,to help and protect against fraud
* Analyse the effectiveness of marketing campaigns
* Boost customer acquisition and retention
* Increase supply chain efficiency

Roles and responsibilities.

* Data analyst – manage the delivery of user satisfaction surveys and reports on data using data visualization

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**Process of Data Analysis : 5 Steps**

1. Define the questions you want answers for

* Type of data needed
* Where will that data come from

1. Collect Data
2. Clean Data

* Clean and ready it for analysis

1. Analyse Data
2. Interpret and share the results

Steps of deleting Data:

Delete unnecessary columns

Identify and delete duplicates

Deal with messing data

Remove unwanted outliers - Outliers are values that differ significantly from other values in your data

Fix inconsistencies - typos and irregular naming conventions