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DATA ANALYTICS



What is data analytics?

- The **process of analyzing raw data to extract meaningful, actionable insights**, which are then used to inform and drive smart business decisions.
- Data analytics is all about answering questions and solving business challenges, and that requires some keen problem-solving skills.



Data analytics and Data science?

- Data analysts tackle and solve discrete questions about data, often on request, revealing insights that can be acted upon by other stakeholders,
 - While data scientists build systems to automate and optimize the overall functioning of the business.
- Data analysts are typically expected to be proficient in software like Excel and, in some cases, querying and programming languages like SQL, R, and Python.
 - Data scientists, on the other hand, might be expected to be proficient in Hadoop, Java, Python, machine learning, object-oriented programming, software development, data mining, and data analysis.

Types of data analysis?

THE FOUR MAIN TYPES OF DATA ANALYSIS

Descriptive

What happened?

Diagnostic

Why did it happen?

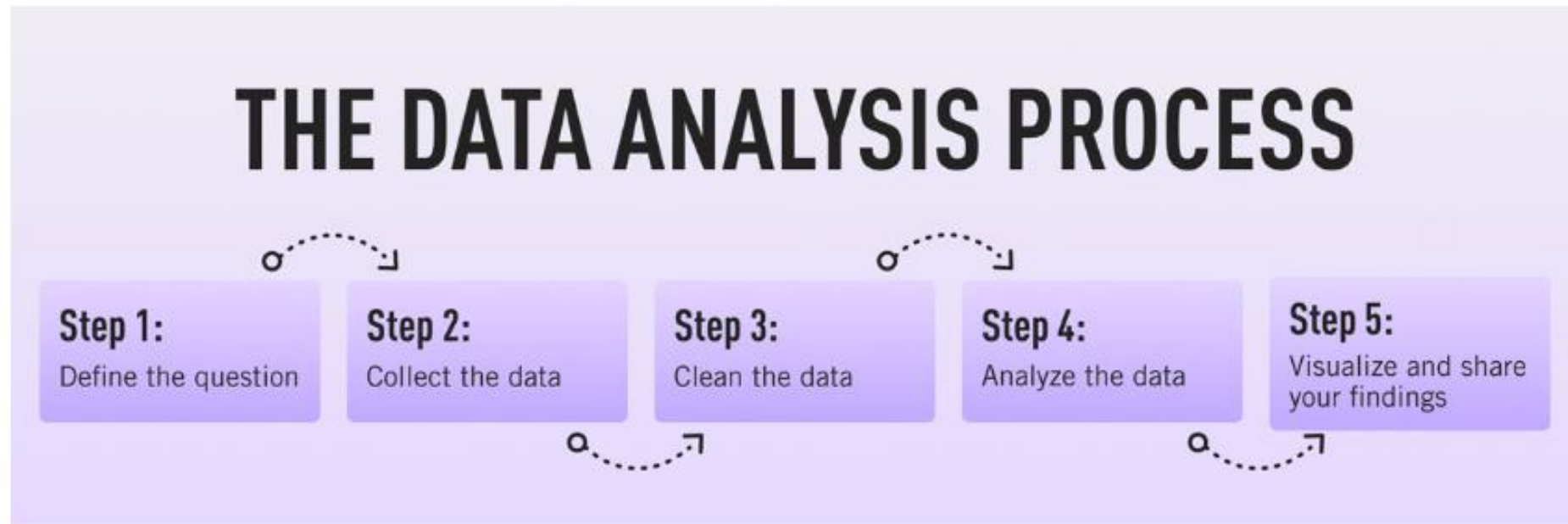
Predictive

What is likely to
happen in the
future?

Prescriptive

What's the best
course of action?

Data Analytics Process





Data analytics tools

- Microsoft Excel, Google Sheet
- Power BI, Looker Studio, Tableau
- Python, R
- RapidMiner, BigML



Hard Skills you need to become a data analyst

- Mathematical and statistical ability
- Knowledge of programming languages such as SQL, R, or Python
- An analytical mindset
- Data visualization



Soft skills you need to become a data analyst

- Keen problem-solving skills
- Excellent communication skills
- Adaptability