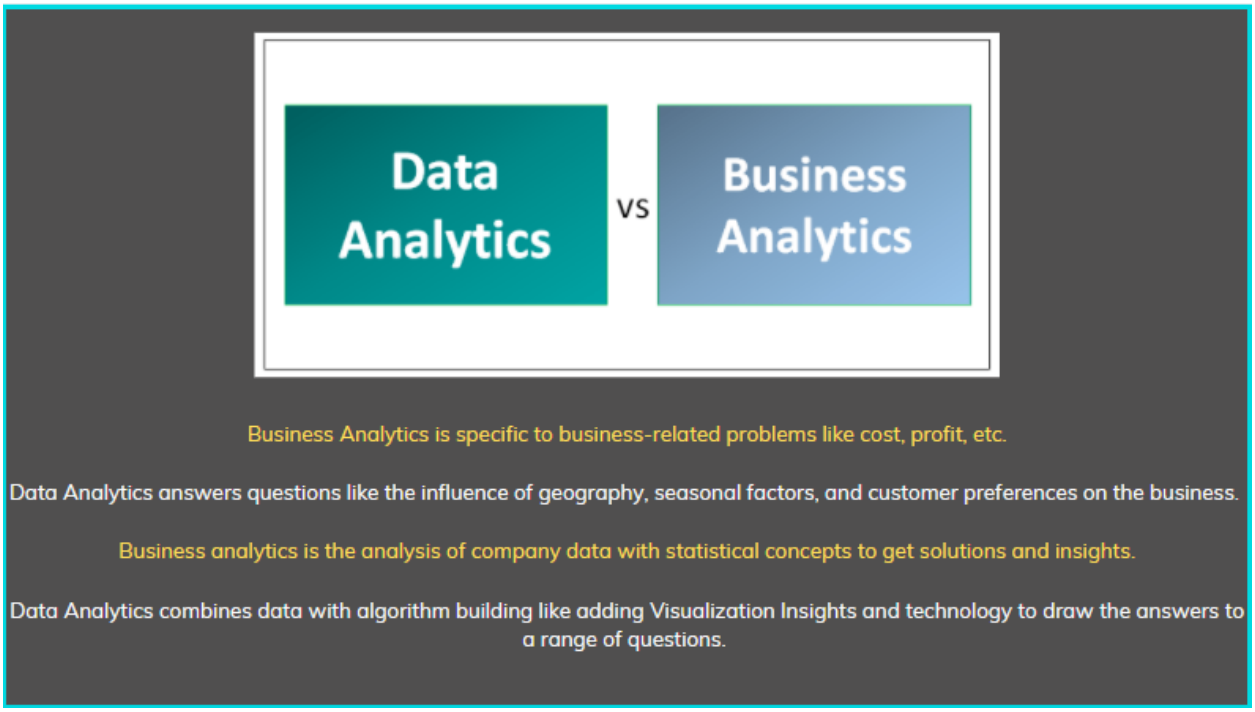
Data Analytics v/s Business Analytics v/s Data Science



	Business Analytics	Data Analytics
Goal	Focuses on identifying trends in the organization that can be optimized to improve overall business planning and performance. Supports continuous improvement in technology and processes. Seeks to arrive at a single version of the truth.	Benefits come from recognizing patterns in a dataset and making accurate predictions based on events.
Data	Data sources are defined in advance based on project goals.	Analysis is more ad hoc with data sources added on the fly as correlations are uncovered.
Approach	Involves defining the goals and requirements for programs and projects. More retrospective and descriptive.	Typically, more predictive and prescriptive. Strives to answer specific questions and discover new insights for competitive advantage.
Team members	CIO, CDO, analytics manager, business analyst, data warehouse engineer	Data analyst, line of business manager

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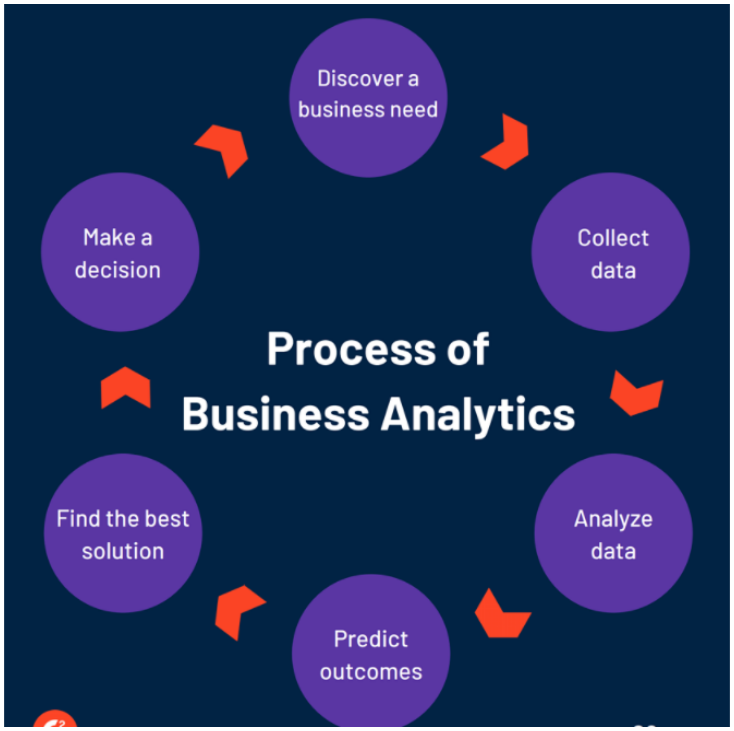
Process of Business Analytics



Process of Data Analytics

Data Analyst v/s Data Science

Data Science vs. Data Analytics: Job roles of Data Scientist and Data Analyst

Data Scientists and Data Analysts utilize data in different ways. Data Scientists use a combination of Mathematical, Statistical, and Machine Learning techniques to clean, process, and interpret data to extract insights from it. They design advanced data modeling processes using prototypes, ML algorithms, predictive models, and custom analysis.

While data analysts examine data sets to identify trends and draw conclusions, Data Analysts collect large volumes of data, organize it, and analyze it to identify relevant patterns. After the analysis part is done, they strive to present their findings through data visualization methods like charts, graphs, etc. Thus, Data Analysts transform the complex insights into business-savvy language that both technical and non-technical members of an organization can understand.

Both the roles perform varying degrees of data collection, cleaning, and analysis to gain actionable insights for data-driven decision making. Hence, the responsibilities of Data Scientists and Data Analysts often overlap.

A Data Analyst must be:

- Well-versed in Excel and SQL database.
- Proficient in using tools like SAS, Tableau, Power BI, to name a few.
- Proficient in R or Python programming.
- Adept in data visualization.

A Data Scientist must be:

- Well-versed in Probability & Statistics and Multivariate Calculus & Linear Algebra.
- Proficient in programming in R, Python, Java, Scala, Julia, SQL, and MATLAB.
- Adept in database management, data wrangling, and Machine Learning.
- Experienced in using Big Data platforms like Apache Spark, Hadoop, etc.