

Demo session: Data Analytics Training

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What is Data Analytics?

Understanding the basics of data insights

Data Analytics is the process of collecting, cleaning, analyzing, and interpreting data to uncover insights, patterns, and trends that help organizations make informed decisions.



Importance of Data

Data analytics transforms raw data into actionable insights, while reporting summarizes past performance. In contrast, data science incorporates advanced techniques to predict future trends and inform strategies.



Types of Data

- **Structured Data**

Data that is organized in a fixed format, usually in rows and columns, making it easy to store and analyze (e.g., Excel sheets, databases).

- **Unstructured Data**

Data that has no predefined format or structure, making it harder to analyze (e.g., emails, text documents, images, videos).

Data Analytics Lifecycle

Data Cleaning

In this crucial first step, raw data is processed to remove inaccuracies and inconsistencies, ensuring a clean dataset for accurate analysis and reliable insights.

Data analysis

Analysts apply various techniques to explore the cleaned data, identifying patterns and trends that provide deeper insights and inform strategic decision-making for the business.

Data visualization

Visual tools are employed to create intuitive representations of data, allowing stakeholders to quickly grasp complex information and derive actionable insights at a glance.

Decision making

Finally, insights derived from the analysis and visualization guide organizational decisions, driving strategic initiatives and improving overall business performance.

Power BI and Tableau Overview

Power BI and Tableau are powerful data visualization tools that enable users to create dynamic dashboards, fostering **insightful data storytelling** and informed decision-making, enhancing the analytical capabilities within organizations.

Daily Responsibilities of Analysts

Key Tasks and Activities in Data Analytics

- Collecting and cleaning data
- Writing queries (SQL/Excel)
- Analyzing data to find trends and patterns
- Creating dashboards and reports
- Communicating insights to stakeholders

Required Skills

Technical

Data analysts must possess strong technical abilities, including proficiency in data manipulation, SQL for querying databases, and familiarity with visualization tools to present insights effectively.

Business understanding

A solid grasp of the business context is essential; analysts need to comprehend industry-specific challenges and objectives to tailor their analyses and make relevant recommendations.

Communication

Effective communication and storytelling are crucial for data analysts, as they must translate complex data findings into clear, actionable insights that resonate with diverse stakeholders.

Order ID	Date	Region	Product	Category	Sales	Profit
1001	01-Jan-24	North	Laptop	Electronics	50000	8000
1002	02-Jan-24	South	Phone	Electronics	20000	3000
1003	03-Jan-24	East	Chair	Furniture	8000	1200
1004	04-Jan-24	West	Table	Furniture	15000	2000
1005	05-Jan-24	North	Headphones	Electronics	5000	500
1006	06-Jan-24	South	Sofa	Furniture	25000	4000

Insight 1: Top Performing Category

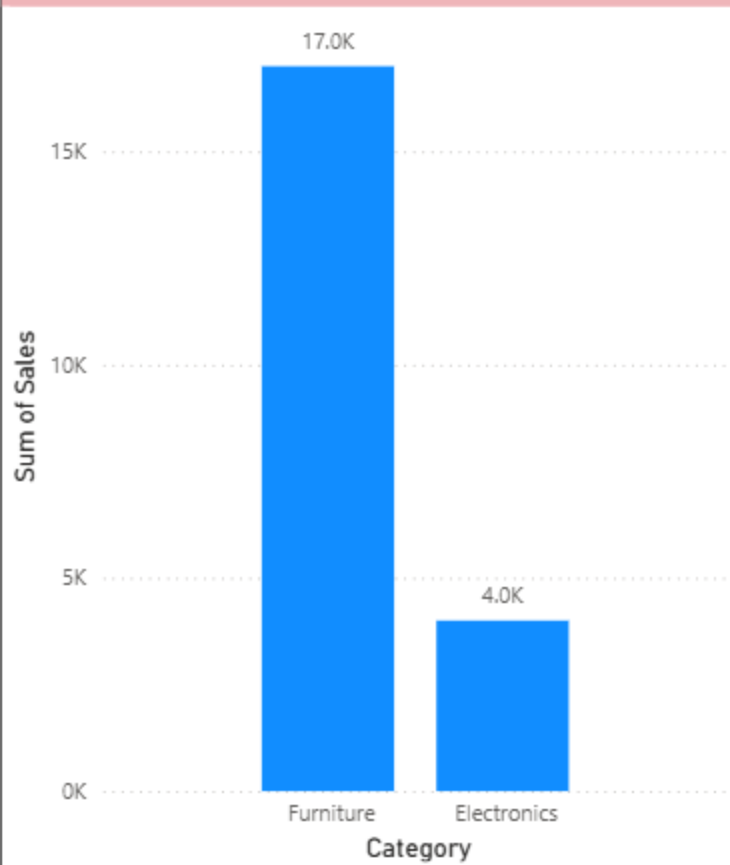
Insight 2: Best Region

Insight 3: High vs Low Profit Products

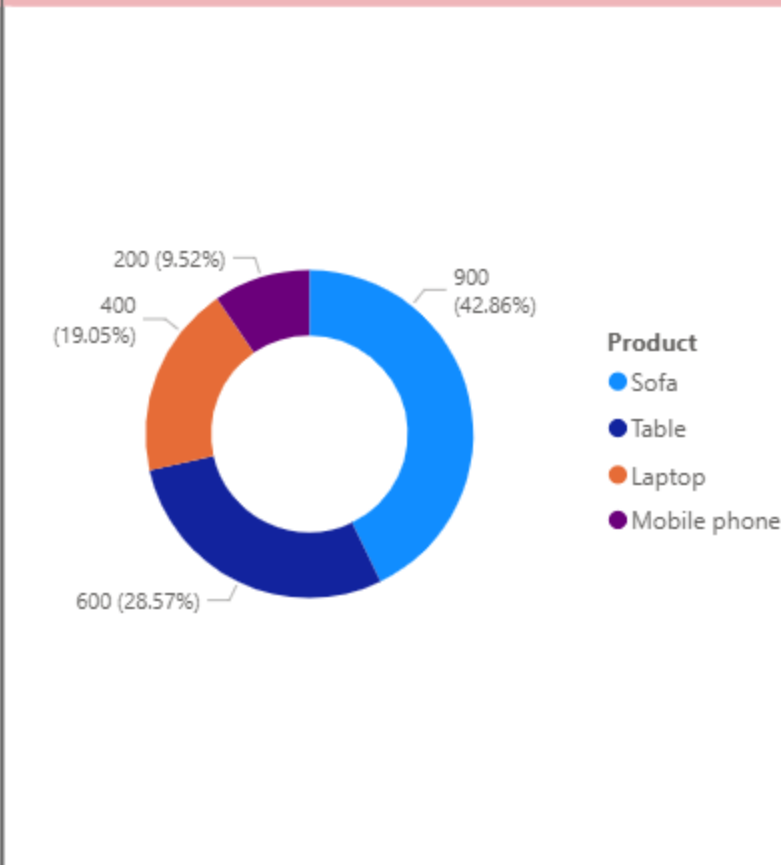
Overall Sales - Profit Analysis

Year <input type="text" value="All"/>	Region	Product
Category <input type="text" value="All"/>	<input type="checkbox"/> East <input type="checkbox"/> North <input type="checkbox"/> South <input type="checkbox"/> West	<input type="checkbox"/> Laptop <input type="checkbox"/> Mobile phone <input type="checkbox"/> Sofa <input type="checkbox"/> Table

Sum of Sales by Category



Sum of Profit by Product



Sum of Profit by Date



Sum of Sales by Region

