

DATA SCIENCE COURSE TUTORIAL # 04

1.7 Real-World Use Cases of EDA

Exploratory Data Analysis (EDA) is the process of examining datasets to understand their structure, quality, and patterns before using them for modeling or decision-making. It helps uncover insights, detect errors, and identify relationships within the data.

Examples of EDA in the Real World

- **Sales Data Analysis:** Identify top-selling products, seasonal trends, and customer preferences.
- **Healthcare Data:** Detect disease patterns, predict outbreaks, and improve treatment plans.
- **Social Media Analysis:** Track user engagement, measure campaign effectiveness, and detect fake accounts.
- **Government Data:** Analyze trends in population growth, economic indicators, or public services.

Questions EDA Can Answer

- What values are missing in the dataset?
- What is the distribution of the data?
- Are there any outliers present?
- Which variables are correlated with each other?

Why EDA Matters

Good EDA ensures that the data is clean, reliable, and ready for analysis. This leads to better decision-making, more accurate models, and stronger business or research outcomes.