Data Analysis Deep Dive Training

BİLGİNÇ IT Academy
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Duration: **2 Day**

The **Data Analysis Deep Dive** course provides a comprehensive introduction to data analysis concepts, methodologies, and statistical techniques used to support **data-driven decision making**.

Data analysis is the process of systematically applying mathematical and statistical techniques to explore, clean, and interpret data. It involves collecting, organizing, and analyzing data to identify patterns and generate insights. This process is often iterative and continuous.

There are two primary approaches to data analysis:

- **Quantitative Data Analysis:** Focuses on numerical data, including statistics, percentages, and calculations. Uses algorithms and analytical tools to extract business value.
- **Qualitative Data Analysis:** Works with non-numerical (categorical) data to identify patterns, themes, and insights for decision-making.

This course introduces key data concepts and then dives deeper into**statistics, probability, and regression analysis techniques**.

Prerequisites

- Some familiarity with data terminologies
- MS Excel for Excercises

Who Should Attend

- Business analysts
- Managers
- Engineers
- Developers
- Anyone new to data analysis

What You Will Learn

By the end of the course, you will be able to:

- Understand the data analysis process and its benefits
- Apply probability and statistical concepts
- Analyze data distributions and variability
- Perform hypothesis testing and inferential analysis
- Use statistical methods in real-world scenarios
- Forecast trends using linear regression

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Training Outline

Data Fundamentals

- Data in real-world scenarios
- Data formats and sources
- Structured vs unstructured data

Introduction to Data Analysis

- Importance and use cases
- Methodologies

Variables

- Numerical vs categorical

Descriptive Statistics

- Central tendency
- Dispersion
- Skewness and kurtosis
- Outliers and missing values

Inferential Statistics

- Population vs sample
- Parameters vs statistics

Probability

- Basics and axioms
- Conditional probability & Bayes theorem

Distributions

- Discrete and continuous distributions
- Excel-based analysis

Data Analysis Techniques

- Correlation and covariance
- Univariate, bivariate, multivariate analysis

Regression

- Simple linear regression
- Multiple regression

Predictive Analytics

- Introduction to forecasting

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