DATA ANALYSIS DEEP DIVE

Course Code: 821567

Learn the fundamentals of Data Analysis, methodologies, and statistics.

Data Analysis is a process of applying statistical and mathematical techniques systematically to understand, explore, and analyze data to find patterns, and draw inferences that help businesses make data-driven decisions. This typically involves multiple activities such as data collection, exploration, cleaning, pre-processing, and organizing data. Many times, data analysis is an iterative ongoing process where the data is continuously collected and analyzed simultaneously. There are two primary methods for data analysis.

Qualitative techniques and quantitative techniques. Quantitative data analysis techniques involve working with quantitative/numerical data including statistics, percentages, and calculations. These techniques also include working with algorithms, mathematical analysis tools, and software to manipulate data and uncover hidden business value. For example, quantitative data analysis used to assess market data helps a company decide a price for its new product. Qualitative data analysis involves, working with non-numerical data i.e categorical variables. Qualitative data analysis is also used in many business processes, such as identifying themes and patterns, answering research questions, etc to improve a product.

This course provides an overview of data concepts and what data analysis is and then deep dives into the fundamentals of Data Analysis such as statistics and probability. This course also focuses on widely used data analysis methods such as regression along with detailed steps to perform the same.

*Must have Microsoft Excel in order to complete class activities.

What You'll Learn

- Data Analysis process, benefits and use cases
- Basic of Probability and Statistics
- Measure of data spread and distributions
- Inferential Statistics and Hypothesis Testing
- Applications of Statistics and Probability theory
- Forecast trends using linear regression analysis

Who Needs to Attend

This data analysis course is perfect for anyone who needs an introduction to Data Analysis such as

- Business Analysts
- Management
- Engineers
- Developers

Prerequisites

- Some familiarity with data terminologies
- MS Excel for Excercises

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CLASSROOM LIVE	$1,950 CAD	2 Day

Classroom Live Outline

- **All about Data**
  - Data in the real world
  - A brief on various formats and sources of data
  - 7 V's of Data
  - Structured vs Unstructured vs Semi-Structured data
  - Data processing types
- **Introduction to Data Analysis**
  - Need for Data Analysis
  - Applications and Use Cases of Data Analysis
  - Data Analysis Methodology
  - Types of variables
  - Numerical vs Categorial Variables
- **Descriptive Statistics**
  - Measures of Central Tendency
  - Measures of Dispersion
  - Data Skewness and Kurtosis
  - Understanding Outliers
  - Understanding missing values
  - Role of Descriptive Statistics in Data Analysis
- **Inferential Statistics**
  - Population and Sample
  - Statistics vs Parameters
- **Introduction to Probability**
  - Basics of Probability
  - Axioms of Probability
  - Conditional Probability and Bayes theorem
  - Applications of Conditional Probability

- **Understanding Probability Distributions**
  - ☒ Discrete Probability Distributions
  - ☒ Continuous Probability Distributions
  - ☒ Performing Distributions in Excel
  - ☒ Why understanding Data Distributions is important for Data Analysis
- **Data Analysis Process**
  - ☒ Understanding Covariance and Correlation
  - ☒ Understanding univariate vs Bivariate vs Multi variate data analysis
  - ☒ Understanding Regression
  - ☒ Simple Linear Regression
  - ☒ Multiple Linear Regression
  - ☒ Exercise
- **Introduction to Predictive Analytics**
  - ☒ Exercise

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VIRTUAL CLASSROOM LIVE	$1,950 CAD	2 Day

Virtual Classroom Live Outline

- **All about Data**
    - Data in the real world
    - A brief on various formats and sources of data
    - 7 V's of Data
    - Structured vs Unstructured vs Semi-Structured data
    - Data processing types
- **Introduction to Data Analysis**
    - Need for Data Analysis
    - Applications and Use Cases of Data Analysis
    - Data Analysis Methodology
    - Types of variables
    - Numerical vs Categorial Variables
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    - Measures of Central Tendency
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    - Data Skewness and Kurtosis
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  - ⬚ Discrete Probability Distributions
  - ⬚ Continuous Probability Distributions
  - ⬚ Performing Distributions in Excel
  - ⬚ Why understanding Data Distributions is important for Data Analysis
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  - ⬚ Understanding Covariance and Correlation
  - ⬚ Understanding univariate vs Bivariate vs Multi variate data analysis
  - ⬚ Understanding Regression
  - ⬚ Simple Linear Regression
  - ⬚ Multiple Linear Regression
  - ⬚ Exercise
- **Introduction to Predictive Analytics**
  - ⬚ Exercise

Feb 12 - 13, 2026 | 8:30 AM - 4:30 PM EST

Apr 27 - 28, 2026 | 8:30 AM - 4:30 PM EDT

Jun 25 - 26, 2026 | 8:30 AM - 4:30 PM EDT

Aug 10 - 11, 2026 | 8:30 AM - 4:30 PM EDT

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PRIVATE GROUP TRAINING	2 Day

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