

# € TRAINING

Data Analysis Techniques With Excel





# Data Analysis Techniques With Excel

## Introduction:

Analyze Data in Excel empowers you to understand your data through natural language queries that allow you to ask questions about it without having to write complicated formulas. This program designed to equip you with practical skills in harnessing Excel's data analysis tools. From sorting and filtering to utilizing pivot tables and charts, this program offers hands-on learning to help you extract insights from datasets.

## Program Objectives:

By the end of this program, participants will be able to:

- Understand the basics of data analysis.
- Learn essential Excel functions for data analysis.
- Explore data visualization techniques in Excel.
- Master data cleaning and preparation.
- Gain proficiency in advanced data analysis tools in Excel.

## Targeted Audience:

- Professionals seeking to enhance their data analysis skills using Excel.
- Business analysts, Researchers, and Data Enthusiasts.
- Individuals in roles requiring data management and analysis responsibilities.
- Anyone interested in improving their proficiency in Excel for data analysis purposes.

## Program Outlines:

### Unit 1.

#### Introduction to Data Analysis and Excel Basics:

- The Data Analysis Process: Steps and Importance.
- Excel Interface and Basic Functions.
- Managing Data: Importing, Formatting, and Sorting.

- Hands-on Exercise: Importing and Formatting Data in Excel.
- Introduction to Basic Formulas and Functions.

## Unit 2.

### Essential Data Analysis Functions in Excel:

- Working with logical functions IF, AND, OR.
- Statistical functions SUM, AVERAGE, COUNT, MIN, MAX.
- Text functions for data cleaning.
- Conditional formatting for data visualization.
- Hands-on exercise: Applying functions and conditional formatting.

## Unit 3.

### Data Visualization Techniques in Excel:

- Introduction to data visualization principles.
- Creating charts and graphs in Excel.
- Customizing charts for clarity and impact.
- PivotTables for summarizing and analyzing data.
- Hands-on exercise: Designing various types of charts and creating pivot tables.

## Unit 4.

### Data Cleaning and Preparation:

- Understanding data quality issues.
- Removing duplicates and handling missing values.
- Text-to-columns and data transformation.
- Merging and splitting data sets.
- Hands-on exercise: Cleaning and preparing data for analysis.

## Unit 5.

## Advanced Data Analysis Tools in Excel:

- Introduction to Solver: Optimization and what-if analysis.
- Scenario Manager for sensitivity analysis.
- Goal Seek and Solver for decision making.
- Introduction to data tables for simulation.
- Hands-on exercise: Applying Solver, Scenario Manager, and Data Tables.