

Data Analysis for Decision Making in Excel

A Project Based Training

key aspects of data analysis in MS Excel

1. Data Cleaning and Management: Power Query
2. Data Relationships and Modeling: Power Pivot
3. Data Analysis with Dax
4. Advanced Excel Functions for Analysis
5. Dynamic Array Formulas
6. Basic Statistics
7. Scenario and What-If Analysis
8. Data Analysis with Pivot Table
9. Chart and Graph- Data Visualization
10. Non-Chart Data Visualization
11. Automating Tasks with Macro Recording

Project Wise Tools Summary

Project Name	Tools Summary
1. Liability Data Analysis	Power Query, Power Pivot & Dax and Pivot Table
2. Supply Chain Data Analysis	Power Pivot and Dynamic Array Functions
3. Marketing Data Analysis	Power Query, Power Pivot and Pivot Table
4. Sale Performance Tracking	Advance Formulas and Functions
5. HR Analytics	Advance Formulas and Functions. Statistical Analysis, Conditional and Custom Formatting, Chart and Non-chart Visualization, Macro Recording
6. Loan Data Analysis	Power Query UI, Power Query M Code, Power Pivot, Advance Formulas and Functions

Summary of the Course

- Course Duration: 2 Months
- No of Classes: 16
- Total Core Class: 14
- Orientation Class: 1
- Feedback and Review Class: 1
- Total Project: 5
- Total Project to be Submitted by Learners: 4
- Weekly Class: 2
- Class Duration: 1.5 Hours
- Class Day: Thursday- 9:00 pm to 10:30 pm
Saturday- 9:00 pm to 10:30 pm
- No of Participants for Each Batch: 20

Detailed Training Outline

Section 1: Introduction - Power Query

- a. What is Power Query
- b. What Does Power Query Do

Section 2: Getting Data into Power Query

- a. Getting Data From Excel Workbook
- b. Getting Data From Excel Table
- c. Getting Data From Folder
- d. Getting Data From Text/CSV
- e. Getting Data From Website
- f. Getting Data From PDF (Office 365)

Section 3: Power Query Editor

- a. Load and Load to
- b. Transform Data
- c. Introduction - Power Query Editor
- d. Introduction - Tab of Power Query Editor
- e. Difference Between Transform and Add Column

Section 4: Power Query- Text Column

- a. Format Text
- b. Split Column
- c. Extract Text
- d. Merge Column

Section 5: Power Query- Number Column

- a. Statistics: Count Value and Count Distinct Value
- b. Standard: Percentage and Percentage of
- c. Absolute Value
- d. Rounding
- e. Is Even and Is Odd

Section 6: Power Query- Date and Time

- a. Basic Date Function
- b. Day of Year, Quarter, Month and Week
- c. Find Age or Length of Service
- d. Day Name
- e. Day Difference

Section 7: Power Query- Combine

- a. Merge Queries
- b. Append Queries
- c. Difference Queries vs Queries as New

Section 8: Power Query- Data Reshaping

- a. Pivot Column vs Unpivot Column
- b. Transpose
- c. Reverse Rows

Section 9: Add Column

- a. Column From Examples
- b. Custom Column
- c. Conditional Column
- d. Index Column
- e. Duplicate Column

Section 10: Grouping

- a. Group By Basic
- b. Group By Advance
- c. Group Operations: Count and Sum
- d. Add Grouping and Aggregation

Section 11: Power Query: Others

- a. Advanced Editor
- b. Reduced Rows
- c. Data Format
- d. Replace Values and Errors
- e. Difference between: Use First Row as Header & Use Headers as First Row
- f. Fill
- g. Query Edit Option
- h. Refresh New Data

Section 12: Power Pivot- Data Modelling

- a. Understanding Table Relationship
- b. One to Many, Many to Many, One to One Relationship
- c. Fact Table and Dimension Table
- d. Dax Introduction
- e. Calculated Column vs Measures

Section 13: Dax- Data Analysis Expression

- a. Dax Measure Filter Context
- b. More Calculation with Dax
- c. More Analysis with Dax

Section 14: Advanced Excel Functions for Analysis

- a. Nested IF and OR/AND
- b. Countifs and Sumifs
- c. Vlookup, Hlookup, Match, Index and Iferror

Section 15: Dynamic Array Formulas

- a. Xlookup
- b. Groupby
- c. Pivotby
- d. Let
- e. Filter
- f. Unique
- g. Sortby
- h. Take

Section 16: Basic Statistics

- a. Measures of Central Tendency
- b. Measures of Dispersion
- c. Frequency and Distribution
- d. Other Statistical Functions

Section 17: Scenario and What-If Analysis

- a. Goal Seek- Single Constrain
- b. Solver- Multiple Constrains

Section 18: Data Analysis with Pivot Table

- a. Excel Advance Table
- b. Getting Started with Pivot Table
- c. Basic to Advance Features of Pivot Table
- d. Difference between Pivot Table and Power Pivot Table

Section 19: Chart Visualization

- a. Difference between Regular Chart and Pivot Chart
- b. Elements of Charts
- c. Different Types of Charts
- d. Formatting Charts
- e. Different cases of Using Different Charts

Section 20: Non-Chart Visualization: Conditional Formatting

- a. Highlight cells that meet criteria
- b. Top/Bottom Rule
- b. Colour Scale & Data bar, Icon Set
- d. Manage Rule
- c. Apply Formula for Dynamic Result

Section 21: Non-Chart Visualization: Custom Formatting

- a. Primary Knowledge of Custom Formatting
- b. Usages of Emoji
- c. Application of Different Number Formatting

Section 22: Non-Chart Visualization: Other Application

- a. Excel Camera
- b. Linked Picture
- c. Sparkline
- d. Usages of Repeat Function

Section 23: Automation of Tedious Task

- a. How to record Macro
- b. How to run Macro
- c. How to assign Macro
- d. Working With Form Control (Buttons)
- e. Visualization Technique by Macro Recording