

# Data Analysis and Visualization with Microsoft Excel

Duration  
2 Days

Delivery Methods  
VILT, Private Group



Analyzing data to find issues, insights and opportunities, is now a critical part of many job roles. Beyond the analysis, data analysts in all job roles must be able to effectively present and communicate their findings in visually compelling ways. Microsoft® Excel® is designed for this purpose. Excel can connect to a wide range of data sources, perform robust data analysis and create diverse and robust data-backed visualizations to show insights, trends, and create reports. These capabilities enable people who use Excel for data analysis to turn data into thoughtful action.

## Who Should Attend

This course is designed for students who already have foundational knowledge and skills in Excel and who wish to perform robust and advanced data and statistical analysis with Microsoft Excel using PivotTables, use tools such as Power Pivot and the Data Analysis ToolPak to analyze data, and visualize data and insights using advanced visualizations in charts and dashboards in Excel. To ensure success, you should have baseline skill using Microsoft Excel worksheets, particularly in creating workbooks with formulas and function

## Course Objectives

- Perform data analysis fundamentals.
- Visualize data with Excel.
- Analyze data with formulas and functions.
- Analyze data with PivotTables.
- Present visual insights with dashboards in Excel.
- Create geospatial visualization with Excel.
- Perform statistical analysis.
- Get and transform data.
- Model and analyze data with Power Pivot.
- Present insights with reports.

## Agenda

### 1 - DATA ANALYSIS FUNDAMENTALS

- Introduction to Data Science
- Create and Modify Tables
- Sort and Filter Data

### 2 - VISUALIZING DATA WITH EXCEL

- Visualize Data with Charts
- Modify and Format Charts
- Apply Best Practices in Chart Design

### 3 - ANALYZING DATA WITH FORMULAS AND FUNCTIONS

- Analyze Data with Formulas and Named Ranges
- Analyze Data with Functions
- Implement Data Validation, Forms, and Controls
- Create Conditional Visualizations with Lookup Functions

### 4 - ANALYZING DATA WITH PIVOTTABLES

- Create a PivotTable
- Analyze PivotTable Data

### 5 - PRESENTING VISUAL INSIGHTS WITH DASHBOARDS IN EXCEL

- Visualize Data with PivotCharts
- Filter Data Using Slicers and Timelines
- Create a Dashboard in Excel

### 6 - CREATING GEOSPATIAL VISUALIZATIONS WITH EXCEL

- Create Map Charts in Excel
- Customize Map Charts in Excel

### 7 - PERFORMING STATISTICAL ANALYSIS

- Visualize Trendlines and Sparklines with Excel
- Analyze Data with the Data Analysis ToolPa

### 8 - GETTING AND TRANSFORMING DATA

- Connect to Data with Queries
- Clean and Combine Data
- Shape and Transform Data

### 9 - MODELING AND ANALYZING DATA WITH POWER PIVOT

- Install Power Pivot in Excel

- Create Data Models with Power Pivot
- Create Power Pivots
- Perform Advanced Data Analysis and Visualization

## 10 - PRESENTING INSIGHTS WITH REPORTS (OPTIONAL)

- Plan a Report
- Create a Report