Data Analysis and Visualization with Microsoft Excel

Overview

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.

Prerequisite Comments

To ensure success, you should have baseline skill using Microsoft Excel worksheets, particularly in creating workbooks with formulas and function

Target Audience

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.

Course Objectives

In this course, you will analyze and visualize data using Microsoft Excel and associated tools. You will:
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.

Course Outline

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