

# Data Analysis and Visualisation Using Power BI

Obtain, Compile, Convert, Import, Orient, Publish, and Distribute

## Introduction

Increasingly information is gathered about our personal and professional lives as technology develops and gets increasingly integrated into them. The rise in popularity and expansion of cloud computing, which offers a wealth of processing power and storage, is directly responsible for the "big data" era in which organisations of all kinds are able to collect and preserve data. Effective use of the data can yield competitive advantages and timely insights.

For data scientists, or any other professional, the creation of data-backed visualisations is essential to the exploration, analysis, and reporting of patterns and insights from data. This is why Microsoft Power BI software was created. Power BI was designed to integrate with a multitude of data sources and facilitate the rapid creation of linked data visualisations for reporting, trend analysis, and insight-gathering. With Power BI, users can create engaging and interactive worksheets, dashboards, and stories that bring data to life and inspire thoughtful action. Power BI's data connection capabilities and visualisation tools go far beyond spreadsheet capabilities.

**The following will be covered in this Power BI training course on analyzing and visualising data:**

- Utilise enormous, independent databases
- Assemble information from several sources
- Create calculated fields with DAX to slice and dice data.
- Construct aesthetically pleasing analytical models
- Display dashboards using Power BI
- At last, you will begin to reap the benefits of the vast amount of data your company has at its disposal.

## Objectives

## After completing this training session on Analysing and Visualising Data with Power BI, you will be able to:

- Utilise self-service data analysis BI
- Establish connections with data sources
- Complete data shaping, profiling, and cleaning.
- Make data visual using Power BI
- By including and altering visual components, you may improve data analysis.
- Calculations for the model data
- Make visuals that are interactive.

## Training Methodology

This course is practical and includes hands-on training on MS Power BI Desktop. Theory construction comprises 20% of the course. Use of MS Power BI is 80%. Laptops will be available for use during the course. Furthermore, electronic copies of the "Microsoft Power BI" book will be delivered during the course.

## Organizational impacts

One of the most widely used data analytics solutions worldwide is Microsoft's Power BI. Why is the platform so unique? The following are Power BI's top seven advantages for your company:

- All can get business intelligence with Power BI.
- Data is given life (interactivity) using Power BI.
- Power BI is safe.
- Numerous data sources are readily connected to Power BI.
- Artificial intelligence is possible with Power BI.
- Power BI is continuously being enhanced.
- Power BI applications are a great way to share content.

## Personal Impact

For businesses wishing to start, manage, and/or expand their business intelligence initiatives, Power BI is an excellent resource. Professionals using Power BI will benefit greatly from the following:

- Enhance professionals' abilities for a range of roles
- Allow the group to analyse general or numerical facts.
- Allow experts to combine and shape data so that it can be analysed.
- Give them several methods for analysing corporate data, visualising the results, and disseminating the results to colleagues around the organisation.
- Gathering data and presenting it to clients, executives, and peers

A broad spectrum of professionals can profit from this Analysing and Visualising Data with Power BI, however the following are the main advantages:

- Financial Analysts, Chief Financial Officers, Accountants, Credit Analysts, Specialists in Budgeting and Planning, Financial Government Officials, Corporate Finance Analysts, and Corporate Finance Lawyers
- Executive Leaders, Members of Boards, Regulators, Managers of Private Equity, Strategists, and Trustees
- Bank Lending Officers, Investment Bankers, Venture Capitalists, and Insurance Specialists and Actuaries
- Internal Auditors, Risk Managers, Compliance Officers, Management Consultants, and Marketing Officers

## Course Outline

### Day 1

#### Using Microsoft Data Analytics: An Overview

- How to begin using Microsoft Data Analytics
- Microsoft and data analytics
- How to begin using Power BI
- Obtain information in Power BI
- Obtain information from multiple sources.
- Enhance efficiency
- Fix data mistakes

### Day 2

#### Make analytical models that are aesthetically pleasing.

- Make reports.
- Create a report.
- Improve the report.
- In Power BI, clean, transform, and load data.
- Data sculpting
- Profiling of data
- Make the data structure better.

## Day 3

### Use DAX to create model calculations in Power BI

- Create a Power BI data model.
- Overview of data modeling
- Using tables
- Sizes and Structures
- With Power BI, create model computations using DAX.
- Overview of DAX
- Dashboards in real time
- Advanced DAX

## Day 4

- Enhance the Performance of the Model
- Enhance the performance of the model.
- Improve the data model's functionality.
- Enhance models for direct queries.
- Make dashboards
- Carry out sophisticated analytics
- Sophisticated analytics
- AI visuals to provide data insights

## Day 5

- Dashboards can be published using Power BI.
- Establish and oversee workspaces
- Establishing work areas
- Distributing and overseeing resources
- Utilise Power BI to manage datasets
- Specifications
- Collections of Data