

Power BI: Data Mining and Big Data Analytics

Professional training programme



SPARK TRAINING

Professional training courses for leaders, specialists, and organizations seeking practical capability development.

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— Workshop Overview

As businesses continue to produce vast amounts of data, the ability to turn this information into actionable insights has become a key competitive advantage. Data mining and big data analytics provide organizations with the tools to identify patterns, forecast trends, and make data-driven decisions that fuel growth and efficiency. This Power BI: Data Mining and Big Data Analytics course is designed to help professionals master the skills needed to leverage big data within Microsoft Power BI, one of the most powerful and accessible tools for business intelligence and data analysis. Throughout the course, participants will learn how to import, process, and analyze large datasets, apply advanced data mining techniques, and visualize complex data to uncover key patterns and relationships. Additionally, the course covers how to integrate predictive analytics using AI-powered features in Power BI. With a focus on hands-on learning, this training is ideal for data analysts, business intelligence experts, and decision-makers looking to extract valuable insights from big data and apply them in practical business contexts. By the end of the course, attendees will be equipped to tackle big data challenges, use advanced DAX functions for tailored analytics, and create visually impactful dashboards that communicate insights for strategic decision-making. This course empowers participants to not only interpret large datasets but also to drive data-centric initiatives that turn data into a valuable asset for their organizations. The training course will feature

- An overview of data mining and big data analytics in today's data-driven world
- Understanding how Power BI can be used to analyze large datasets
- Clear course objectives and expected outcomes for participants

Why Attend

This training course will utilise a variety of proven adult learning techniques to ensure maximum understanding, comprehension and retention of the information presented. This includes theoretical presentation of the concepts, but the emphasis will be on the exercises performed by the delegates with the guidance of the instructor.

Who Should Attend

Data analysts, business intelligence professionals, and IT specialists interested in big data analysis
Business managers and decision-makers seeking to leverage big data insights for strategic planning
Professionals in marketing, finance, operations, and research fields aiming to apply data mining techniques

— Learning Objectives

- Equip participants with skills to process, visualize, and analyze large datasets using Power BI
- Understand data mining techniques and how they can be applied in Power BI

- Teach best practices for handling big data, from importing to transforming and visualizing
- Enable participants to use advanced analytics features, including predictive analytics and clustering
- Develop the ability to identify patterns, trends, and insights from large datasets

Course Outline

**DAY
1**

Day One: Introduction to Big Data and Power BI Essentials

- Understanding big data and its applications in business
- Overview of Power BI and its relevance to big data analytics
- Connecting to large data sources and managing data ingestion (SQL, Hadoop, Azure, etc.)
- Introduction to Power Query for data transformation and cleansing
- Hands-on: Loading and preparing a large dataset in Power BI

**DAY
2**

Day Two: Data Modeling and Advanced Data Mining Techniques

- Building efficient data models to handle large datasets
- Introduction to data mining concepts: classification, clustering, and association
- Using DAX (Data Analysis Expressions) for calculated fields and complex measures
- Applying data mining techniques with DAX in Power BI
- Hands-on: Creating data models and applying DAX for data mining

**DAY
3**

Day Three: Data Visualization and Identifying Patterns in Big Data

- Exploring visualizations optimized for big data in Power BI
- Using Power BI visuals to identify trends, patterns, and anomalies
- Interactive dashboards and drill-down features for big data insights
- Advanced visual techniques for clustering, classification, and segmentation
- Hands-on: Building a big data dashboard with advanced visualizations

**DAY
4**

Day Four: Advanced Analytics and AI Integration in Power BI

- Introduction to AI features in Power BI for predictive analysis and forecasting
- Leveraging the Key Influencers visual to detect trends and factors impacting outcomes
- Using Power BI's Q&A and AI-driven clustering to enhance data mining
- Applying machine learning models and integrating Azure Machine Learning with Power BI
- Hands-on: Implementing AI-powered analytics and predictive insights in Power BI

**DAY
5**

Day Five: Optimizing, Publishing, and Sharing Big Data Insights

- Optimizing big data reports and dashboards for performance and accessibility
- Publishing and securely sharing Power BI dashboards with stakeholders
- Integrating Power BI reports with Microsoft Teams and SharePoint for collaboration
- Case studies: Real-world applications of big data analytics using Power BI

- Final Hands-on Project: Creating and presenting a comprehensive big data analytics dashboard

— Upcoming Classroom Dates

DATE	LOCATION	FEE
12 - 16 October 2026	Vienna - Austria	€2,125
9 - 13 November 2026	Barcelona - Spain	€1,925
14 - 18 December 2026	Paris - France	€2,250
18 - 22 January 2027	Munich - Germany	€2,125
15 - 19 February 2027	Amsterdam - Netherlands	€2,125
15 - 19 March 2027	London - United Kingdom	€2,100
19 - 23 April 2027	Istanbul - Türkiye	€1,425
17 - 21 May 2027	Vienna - Austria	€2,125

— Certificate and Registration

Participants who attend and complete the full programme receive a SPARK Training Certificate of Completion. For registration, in-house delivery, or availability questions, contact info@sparktraining.eu or +31 85 115 0004.