

## Mastering Power BI

**Power BI** is a powerful business intelligence tool developed by Microsoft for analyzing data and sharing insights.

This course covers the key concepts and techniques for mastering Power BI, from data preparation and visualization to advanced analytics and administration. Depending on the audience's background and goals, you can adjust the depth and complexity of each topic and incorporate hands-on exercises and projects to reinforce learning.

### Tech Stack To Be Covered



## Mastering Power BI

### Module 1: Introduction to Power BI

- Understanding the role of business intelligence in decision-making
- Overview of Power BI and its components: Power BI Desktop, Power BI Service, Power BI Mobile
- Power BI licensing and deployment options

## **Module 2: Getting Started with Power BI Desktop**

- Installing Power BI Desktop
- Connecting to data sources: Excel, CSV, databases, cloud services
- Introduction to Power BI Desktop interface: report view, data view, model view

## **Module 3: Data Preparation in Power BI**

- Understanding Power Query Editor: data cleansing and transformation
- Merging and appending queries
- Data modeling basics: relationships, calculated columns, measures

## **Module 4: Building Basic Visualizations**

- Creating bar charts, line charts, and pie charts
- Customizing visualizations with colors, shapes, and formatting options
- Using slicers, filters, and drill-downs for interactivity

## **Module 5: Advanced Visualization Techniques**

- Implementing advanced charts: treemaps, histograms, scatter plots
- Adding trend lines, forecasts, and reference lines
- Creating custom visuals and importing visuals from the marketplace

## **Module 6: Geographic Mapping in Power BI**

- Plotting geographic data on maps
- Configuring map layers, styles, and tooltips
- Analyzing spatial patterns and trends

## **Module 7: DAX (Data Analysis Expressions)**

- Introduction to DAX functions and syntax

- Creating calculated columns, measures, and calculated tables
- Implementing time intelligence calculations

### **Module 8: Advanced Data Modeling**

- Working with complex data models: many-to-many relationships, bi-directional filtering
- Implementing row-level security (RLS)
- Optimizing data models for performance

### **Module 9: Sharing and Collaboration with Power BI Service**

- Publishing reports and dashboards to Power BI Service
- Creating and managing workspaces
- Configuring security settings and sharing options

### **Module 10: Power BI Mobile**

- Overview of Power BI Mobile app
- Accessing and interacting with reports on mobile devices
- Managing and sharing content on Power BI Mobile

### **Module 11: Data Connectivity and Integration**

- Connecting to on-premises data sources using Power BI Gateway
- Integrating Power BI with other Microsoft products (Excel, SharePoint, Teams)
- Connecting to external services and APIs

### **Module 12: Power BI Administration and Governance**

- Administering Power BI tenants: managing users, licenses, and permissions
- Configuring data refresh schedules and gateway settings
- Monitoring usage and performance with Power BI Admin Portal

### **Module 13: Power BI Best Practices and Tips**

- Design principles for effective data visualization
- Performance optimization techniques in Power BI
- Documenting and sharing best practices within the organization

### **Module 14: Power BI Certification and Career Path**

- Overview of Power BI certification exams and preparation resources
- Career opportunities for Power BI professionals
- Building a portfolio of Power BI projects and showcasing skills