

# Power BI

A comprehensive learning  
roadmap

## Power BI Basics

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- Introduction to Business Intelligence
- Power BI Desktop, Service & Mobile
- Power BI Interface & Navigation
- Connecting to Data Sources
- Publishing & Sharing Reports

## Data Sources & Connectivity

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- Importing from Excel, CSV & PDF
- Connecting to SQL Databases
- Web & API Data Sources
- SharePoint & OneDrive Integration
- Azure & Cloud Data Sources

## Power Query (Data Transformation)

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- Power Query Editor Interface
- Cleaning & Shaping Data
- Merging & Appending Queries
- Conditional Columns & Custom Columns
- M Language Fundamentals

## Data Modeling

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- Star Schema & Snowflake Schema
- Relationships (One-to-Many, Many-to-Many)
- Cardinality & Cross-filter Direction
- Calculated Columns vs Measures
- Role-Playing Dimensions

## DAX (Data Analysis Expressions)

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- DAX Syntax & Fundamentals
- Filter Context & Row Context
- CALCULATE & FILTER Functions
- Time Intelligence Functions (YTD, MTD, QTD)
- Advanced DAX (RANKX, TOPN, SWITCH, DIVIDE)

## Visualizations & Report Design

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- Core Visuals (Bar, Line, Pie, Card, Table)

- Maps & Geospatial Visuals
- Slicers, Filters & Drill-through
- Custom Visuals from AppSource
- Bookmarks, Buttons & Page Navigation

## Dashboard Design & UX

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- Dashboard vs Report
- Design Principles & Color Theory
- Themes & Custom Formatting
- Mobile Layout Design
- Storytelling with Data

## Power BI Service & Collaboration

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- Workspaces & App Deployment
- Row-Level Security (RLS)
- Scheduled Data Refresh
- Sharing, Embedding & Export Options
- Power BI Goals & Scorecards

## Advanced Analytics

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- Q&A; Natural Language Queries
- AI Visuals (Key Influencers, Decomposition Tree)
- Anomaly Detection
- Forecasting & Trend Lines
- Python & R Integration in Power BI

## Power BI & Microsoft Ecosystem

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- Power BI + Excel (Analyze in Excel)
- Power BI + Teams & SharePoint
- Power BI + Azure Synapse Analytics
- Power BI + Dataflows & Datamart
- Power BI + Microsoft Fabric

## Performance & Optimization

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- Performance Analyzer Tool
- DAX Studio for Query Optimization
- Reducing Report Load Time
- Import Mode vs DirectQuery vs Live Connection
- Aggregations & Composite Models

## Administration & Governance

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- Power BI Admin Portal

- Tenant Settings & Licensing (Free, Pro, Premium)
- Data Sensitivity Labels
- Audit Logs & Usage Metrics
- Deployment Pipelines (Dev / Test / Prod)

## Real-world Projects

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- Sales Performance Dashboard
- HR Analytics & Employee Attrition Report
- Financial P&L; Dashboard with YOY Comparison
- Supply Chain & Inventory Tracker
- Executive KPI Scorecard with Drill-through