

Data Analysis

using Power BI with Generative AI



Session Starting
from 19th August

Time
7:15 pm to 9:45 pm

Days: Tuesday
and Thursday

8 sessions

Course Objective:

By the end of this course, learners will be able to efficiently perform end-to-end data analysis using Power BI enhanced with Generative AI tools. They will master practical skills in data preparation, modeling, visualization, and advanced analytics, while leveraging AI-powered features like ChatGPT and Microsoft Copilot to automate insights, write complex queries, generate narratives, and accelerate reporting workflows. This course empowers analysts and business users to transform raw data into actionable intelligence faster and more accurately, without extensive coding knowledge.

DATA
ANALYSIS

Who Should Attend:

- Finance professionals and analysts
- Business and data consultants
- MBA students and graduates
- Entrepreneurs and founders
- Beginners in data analysis
- Project managers using data reports
- Marketing analysts tracking KPIs
- HR professionals using dashboards

Trainer
**Raheel
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Course Outline:

Power BI & Generative AI Essentials

- Overview of Data Analysis Lifecycle
- Role of Power BI in BI/Analytics
- What is Generative AI? How does it fit into BI
- Introduction to Microsoft Copilot, ChatGPT, Gemini, Claude, and Azure OpenAI
- Setting up OpenAI API with Excel & Power BI
- GenAI Prompting Basics: Asking better questions

Mini Project:

Use ChatGPT to summarize raw sales data and suggest Power BI visualizations

Data Preparation with Power Query + GenAI

- Importing data from Excel, Web, SQL, and SharePoint
- Data cleaning and transformation techniques
- Writing M-code with Copilot and ChatGPT
- Handling data quality issues using AI
- AI-prompted column standardization and merging

Mini Project:

Clean and restructure an HR dataset using Power Query and AI-generated M-code



Course Outline (Continued):

Data Modeling & DAX with AI

- Creating relationships and data models (Star & Snowflake schema)
- Difference between Measures, Calculated Columns & Tables
- Writing KPIs and custom metrics with DAX
- Using ChatGPT to generate and debug DAX
- Prompt engineering for advanced DAX expressions

Mini Project:

Create a sales model and use AI-generated DAX for Year-over-Year comparisons

Visualization & Dashboarding with Generative AI

- Data storytelling principles for visual analytics
- Creating interactive dashboards with slicers, bookmarks, tooltips
- Using Copilot to auto-suggest visualizations
- AI-generated narratives using Smart Narrative visual
- Summarizing insights with ChatGPT (from dashboard exports)

Mini Project:

Design a Financial Performance dashboard using AI-guided visual strategy

Advanced Analytics + Natural Language with AI

- Natural Language Q&A visual and custom phrasing
- Time intelligence functions with ChatGPT
- Forecasting and AI visuals (Decomposition Tree, Anomaly Detection)
- Use Azure OpenAI to generate sentiment/tone analysis
- Use ChatGPT to classify, cluster, or tag rows for segmentation

Mini Project:

Build a customer insights panel with AI-driven classifications and trends

Course Outline (Continued):

Deployment, Automation & AI Integration

- Publishing and sharing dashboards in Power BI Service
- Using Copilot in Power BI Service for insights, documentation
- Auto-scheduling reports and insight delivery using Power Automate
- Emailing AI summaries and attaching snapshots
- Ethical AI, governance, security in GenAI BI use cases

Mini Project:

Create an AI-powered alert system for executive-level reporting via email

Capstone Project: AI-Augmented BI for Business Decision Making

Use Case Options:

- Finance: Profitability Analysis & Forecasting
- HR: Employee Attrition & Engagement Dashboard
- Sales: Sales Funnel Optimization with AI predictions

Deliverables:

- Full end-to-end AI-powered Power BI solution
- Use of AI for DAX, M-Code, Narratives, and Insight Automation
- PowerPoint Summary Report + Interactive Dashboard

