

## **Excel with BI**

**Duration: 5 days**

### **Day 1 – Advanced Excel: Data Analysis & Productivity**

#### **Agenda:**

- Advanced Excel interface, productivity tools, and best practices
  - Advanced formulas and functions
    - Logical functions (IF, IFS, SWITCH)
    - Lookup and reference functions (XLOOKUP, INDEX–MATCH)
    - Dynamic array functions (FILTER, SORT, UNIQUE)
  - Text, date, and financial functions
  - Data validation using formulas and custom rules
  - Error handling and formula auditing
  - Working with large datasets efficiently
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### **Day 2 – Advanced Excel: Automation, Modeling & Dashboards**

#### **Agenda:**

- Advanced Pivot Tables and Pivot Charts
    - Calculated fields and measures
    - Slicers and timelines
  - Power Query in Excel
    - Importing, cleaning, and transforming data
    - Merging and appending data from multiple sources
  - What-If analysis tools
    - Goal Seek, Scenario Manager, Data Tables
  - Dashboard design principles in Excel
  - Introduction to Excel automation (macro recording overview)
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## **Day 3 – Power BI: Data Preparation & Modeling**

### **Agenda:**

- Power BI ecosystem overview (Desktop, Service, Mobile)
  - Connecting to data sources (Excel, CSV, databases)
  - Data transformation using Power Query Editor
  - Data modeling concepts
    - Relationships and cardinality
    - Star schema best practices
  - Introduction to DAX
    - Calculated columns vs measures
    - Basic DAX functions
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## **Day 4 – Power BI: Advanced Analytics & Visualization**

### **Agenda:**

- Advanced DAX functions
    - CALCULATE, FILTER, ALL, RELATED
    - Time intelligence functions
  - Creating advanced visuals
    - Custom visuals and formatting
    - Drill-down, drill-through, and tooltips
  - Interactive reports using slicers and filters
  - Designing professional dashboards
  - Performance optimization techniques
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## **Day 5 – Power BI: Deployment, Automation & Business Insights**

### **Agenda:**

- Publishing reports to Power BI Service
- Data refresh and gateway concepts

- Row-level security (RLS) implementation
- Integrating Power BI with Excel and other tools
- Best practices for storytelling with data
- Capstone project
  - End-to-end solution: Excel data to Power BI dashboard
- Review, best practices, and next steps