

# Modern Excel: Data Analysis, Dashboards & AI Integration (2 Days)

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## Day 1 – Advanced Excel Foundations & Core Data Analysis

### Session 1: Advanced Formulas

- XLOOKUP
- INDEX-MATCH
- Nested IFs
- IFS
- SWITCH

### Session 2: Dynamic Arrays & Functions

- FILTER
- SORT
- UNIQUE
- LET
- LAMBDA

### Session 3: Data Cleaning & Preparation

- Data cleaning techniques
- Text and logical functions
- Data validation
- Conditional formatting

### Session 4: Data Analysis Basics

- Power Query (basics)
- Pivot Tables
- Pivot Charts
- Audit checks

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## Day 2 – Visualization, Automation & AI in Excel

### Session 1: Advanced Data Handling

- Power Query (advanced transformations)
- Power Pivot and data modeling fundamentals
- Data relationships and measures
- Scenario analysis (What-if Analysis)

- Goal Seek and Solver

### **Session 2: Dashboard & Reporting**

- Dashboard creation
- Interactive dashboards (slicers and controls)
- KPI structuring
- Data storytelling and MIS reporting frameworks

### **Session 3: AI in Excel**

- AI features in Excel (Analyze Data / Ideas)
- AI-driven insights generation
- Forecasting and trend analysis
- AI-based pattern detection

### **Session 4: Automation & Integration**

- Microsoft Copilot in Excel: use cases and applications
- Automation techniques
- Macro recording (basic)
- Excel and Power BI integration
- Reducing manual reporting through AI workflows
- AI maturity model (Gartner framework)
- AI adoption and reporting roadmap