

Advancing Power BI with Automate and AI builder

Duration: 7 days (56 hours)

Overview:

This elaborate course on advancing Power BI with Power Automate and AI Builder covers a wide range of topics, including data connection, preparation, and modelling in Power BI with an in depth understanding of advanced calculations with DAX, and data visualization techniques. It also covers the advanced Power BI features like paginated reports and real-time dashboards, managing workspaces and datasets, and an introduction to Power Automate and AI Builder. The course integrates these components to enhance Power BI and Power Automate capabilities, followed by practical sessions on building flows using Copilot and live data streaming

Course Objectives:

In this course, we will cover advance concepts related to:

- Power BI
- Power Automate
- AI builder
- Dataflows
- Copilot Capabilities
- Integrations

Course Content:

Module 1: Get data in Power BI

- Getting Data from Multiple Sources
 - o Excel (Locally Stored and Cloud-Based Excel file)
 - o Access
 - o CSV files and folders
 - o Web
 - o Data Verse and Data flow
 - o Azure SQL Database
 - o Demo
- Resolve data import errors
 - o Web Authentication and Loading Tables
 - o Resolving Data Load Error
 - o Resolving Data Path Error
 - o Resolving Refresh Error
 - o Exploring Power View Visualization

Module 2: Preparing Data in Power BI

- Introduction to Enhancing Data Structure

- Enhancing Data Structure
- Join Types Merge Queries
- Profile data in Power BI
- Shape the initial data
- Simplify the data structure
- Evaluate and change column data types
- Introduction to Designing a Data Model
 - Introduction to Dimensional Modelling
 - Elements of the Dimensional Data Model
 - Fact Dimension
 - Attributes
 - Fact Table
 - Dimension Table
 - Fact Vs Dimension
 - Understanding cardinality
 - Creating Relationships and their effects
 - Define data granularity
 - Configuring Tables
 - Work with relationships and cardinality
 - Resolve modelling challenges
 - Creating Hierarchy
 - Explore time-based data

Module 3: Calculation with DAX

- Introduction to DAX
- Write DAX formulas
- Calculated Column
- Measures
 - Create simple measures
 - Create compound measures
 - Create quick measures
 - Calculate Tables
 - Compare calculated columns with measures
 - Evaluation Context
 - Types of Contexts
- Basic Math calculation
 - Summarization and Aggregation
 - Modify filter context
 - Use filter modifier functions
 - Examine filter context
 - Perform context transition
- Working with context in the data model
 - Getting data from other tables using RELATED and RELATEDTABLE
 - Modifying the context using CALCULATE function
 - Use of USERELATIONSHIP function
- Using DAX to perform Advance calculation

- Handling errors gracefully
- Understanding Row Context with Iterator function
 - SUMX
 - AVERAGEX
 - MAXX
 - RANKX)
- Creating and Manipulating Table in DAX with functions
 - FILTER
 - SUMMARIZE
 - SUMMARIZECOLUMNS
 - GROUP BY
 - ADD COLUMN
 - CALENDAR & CALENDARAUTO
- Working with Time
 - DatesYTD
 - DatesQTD
 - DatesMTD
 - Year on Year growth calculation
 - DateAdd
 - Parallelperiod
 - SameperiodLastYear
 - Importance of Variables and Comments
 - Introduction to Optimizing Model Performance

Module 4: Visualize your data

- Getting Started with Visualisations
 - Creating reports with different visuals
 - Cluster and Stacked column and bar chart
 - Map visualizations
 - Matrices and tables
 - Create scatter, waterfall, and funnel charts
 - Modify colors in charts and visuals
 - Page layout and formatting
 - Formatting different Visuals
- Enhancing Report
 - Filtering and Sorting Reports
 - Sync Slicers
 - Creating Drill Through Pages
 - Advance Drill Through
 - Applying Conditional Formatting
 - Control visibility of measure in DAX
 - Bookmarks and Selection
 - Display measure for specific users
- Introduction to advanced data visualization concepts
 - Create and import a custom report theme
 - Enable personalized visuals in a report
 - Design and configure Power BI reports for accessibility
 - Review report performance

- Using Performance Analyzer
- Explore statistical summary
- Identify outliers with Power BI visuals
- Apply clustering techniques
- Conduct time series analysis
- Use the Analyze feature
- Use advanced analytics
- Custom visuals
- Advanced Analytics – Grouping
- Advanced Analytics – Binning
- Advanced Analytics – Bandings
- Creating Animated
- Scatter Charts
- Using Visuals to Forecast Values

Module 5: Advance feature of Power BI

- Downloading Report Builder and creating Paginated Report
 - Introduction to paginated reports
 - Get data
 - Create a paginated report
 - Work with charts on the report
 - Publish the report
- Introduction to creating Dashboards
 - Creating Dashboards – Editing Published Reports and Pinning to a New Dashboard
 - Introduction to Real-Time Dashboards
 - Creating Forms for Pushing Data
 - Creating Push Datasets
 - Accessing Power Automate
 - Creating Flow to Push Form Data into Dataset
 - Respond to Survey
 - Enhancing Dashboards with Custom Themes
 - Enhancing Dashboard with Videos
 - Enhancing Dashboard Tile Alerts
 - Using Q&A and Quick Insights and Add to Dashboards

Module 6: Managing Workspace and Datasets

- Introduction to Workspace
 - Managing Workspace
 - Distribute a report or dashboard
 - Monitor usage and performance
 - Creating and Publishing Apps
 - Loading Sample Data and Making Workspace Premium
 - Recommend a development life cycle strategy
- Introduction to Managing Datasets
 - Creating Parameters
 - Editing Parameters in the Service and Refreshing Datasets and Visuals

- Working with What if Parameter
- Implementing Row Level Security

Module 7: An Introduction to Power Automate

- What is Microsoft Power Automate?
- The benefits of automation
- How to get to Power Automate
- Using Power Automate templates
- Navigating in Power Automate
- Editing a Power Automate
- Publish and trigger a Power Automate
- Turn off or delete a Power Automate

Module 8: Power Automate logic and Integration

- Adding conditions
- Designing switches
- Using apply to each
- Configuring do until logic
- Adding a scope
- Standard and premium connectors
- Connecting to web services
- Using Flow with on-premises data

Module 9: The App, Administration and maintenance

- Downloading the mobile app
- Signing in and account management
- Building and managing Power Automates
- Creating buttons
- Feeds and approvals
- Maintaining a Power Automate
- View history and analytics
- Sharing a Power Automate
- Export and import Power Automates
- Office 365 administration for Power Automate

Module 10: Get started with AI Builder

- Introduction to AI Builder
- Choose an AI capability
- Create your first model
- Ways to use your models

Module 11: Integrate Power Automate with Copilot and Power BI

- Build flows using co-pilot in Power Automate
- Create a Power Automate Visual
- Live streaming of data using Power Automate

- Practice session on flows, co-pilot and Power BI
- Learn about dataflows