HDTC Training Center

Provide

Technical proposal of the Training program

Advanced Power BI

Introduction

The Advanced Power BI Program is designed to provide IT professionals with advanced technical skills required to design, develop, and manage enterprise-level business intelligence solutions using Microsoft Power BI.

The program emphasizes advanced data modeling, data preparation, DAX optimization, interactive visualization, and AI-driven analytics to support data-driven decision-making in complex environments.

Program Objectives:

At the end of this training program, participants will be able to:

- Design efficient and scalable Power BI data models following best practices
- Perform advanced data transformation and automation using Power Query
- Develop optimized and complex DAX calculations for business analytics
- Build advanced, interactive, and user-centric Power BI reports and dashboards
- Apply advanced analytics and AI capabilities within Power BI
- Optimize performance and troubleshoot Power BI solutions

Program Outlines:

★ Unit 1: Advanced Data Modeling

- ✓ Power BI Data Model Architecture
- ✓ Relationships and Cardinality
- ✓ Star Schema and Modeling Best Practices
- ✓ Calculated Columns and Measures
- ✓ Model Performance Optimization

★ Unit 2: Data Preparation with Power Query

- ✓ Advanced Power Query Transformations
- ✓ Merging and Appending Queries
- ✓ Handling Complex and Large Data Sets
- ✓ Data Quality and Validation Techniques
- ✓ Automating Data Refresh Processes

★ Unit 3: Advanced DAX Techniques

- ✓ DAX Evaluation Context (Row and Filter Context)
- ✓ Advanced Time Intelligence Functions
- ✓ Complex Measures and Business Calculations
- ✓ Optimizing DAX Performance
- ✓ Debugging and Troubleshooting DAX

★ Unit 4: Advanced Data Visualization

- ✓ Advanced and Custom Visuals
- ✓ Interactive Reports and Drill-Through
- ✓ Dynamic Titles and Tooltips
- ✓ Dashboard Design Best Practices
- ✓ User Experience and Accessibility

★ Unit 5: Advanced Analytics & AI in Power BI

- ✓ What-If Parameters and Scenario Analysis
- ✓ Key Influencers and Decomposition Tree
- ✓ AI Visuals and Smart Insights
- ✓ Integrating R or Python Visuals
- ✓ Performance Analyzer Tool

Program Outputs:

- Build high-performance Power BI data models using star schema design
- Prepare, cleanse, and validate complex datasets efficiently
- Create advanced DAX measures and calculations aligned with business logic
- Design interactive and dynamic visualizations with enhanced user experience
- Apply AI features such as Key Influencers, What-If analysis, and smart insights
- Analyze and improve report and model performance using built-in tools

Target Audience:

- ✓ IT Professionals
- ✓ Business Intelligence Developers
- ✓ Data Analysts
- ✓ Data Engineers
- ✓ Database Administrators
- ✓ Technical Consultants

Program competencies and qualifications:

- Advanced Power BI Development
- Data Modeling and BI Architecture
- Advanced DAX and Power Query Techniques
- Data Visualization and UX Design
- BI Performance Optimization
- Advanced Analytics and AI Integration

Training methods:

- ✓ Technology-based learning.
- ✓ Simulation in Training.
- ✓ On-the-job guidance.
- ✓ Trainer-Led Training.
- ✓ Work Teams and Roles.
- ✓ Films and Videos.
- ✓ Case Studies and Workshops.