Course Description: The creation of data-backed visualizations is a key method data scientists, or any professional, can explore, analyze, and report insights and trends from data. Microsoft® Power BI® software is designed for this purpose. Power BI was built to connect to a wide range of data sources and allows users to quickly create visualizations of connected data to gain insights, show trends, and create reports. Power BI's data connection capabilities and visualization features go far beyond those that can be found in spreadsheets, allowing users to create compelling and interactive worksheets, dashboards, and stories that bring data to life and turn data into thoughtful action.

Duration: Instructor-led, group-paced, classroom-delivery learning model with structured hands-on activities
14 hours (2 days)

Course Objectives: To make use of the Power BI to visualize data:
- Analyze data with self-service BI.
- Connect to data sources.
- Perform advanced data modeling and shaping.
- Visualize data with Power BI.
- Enhance data analysis.
- Model data with calculations.
- Create interactive visualizations.

Prerequisite: To ensure your success, you should have experience using Power Query to connect to data sources and cleanse data prior to reporting. A solid working knowledge of constructing Pivot Tables is helpful as it serves as the foundation for other reporting options.

Course Outline

Introduction to Power BI
- Understanding the Purpose of Power BI
- Exploring the various versions of Power BI
- Exploring the Power BI interface
- Exploring a Sample Power BI report
- Showcasing customization options

Connecting to Data Sources using Power Query
- Connecting to databases (Access, SQL, OData)
- Extracting content from PDF files
- Exploring Data Types
- Creating Pivot Tables
- Understanding query modes

Merging, Grouping, and Summarizing data
- Understanding the various join types
- Understanding table relationships
- Building visualization using natural language and A.I.

Creating Drill Though reports

Power BI Visualizations
- Slicers
- Charts (Line, Bar, Pie)
- Cards and KPIs

Enhancing reports using Conditional Formatting
- Icons
- Cell Shading (background colors)
- Data bars

Creating custom tooltips for enhanced understanding

DAX Basics
- Calculated Columns
- Measures

Introduction to Calendar Tables
- Building a Calendar Table using DAX
- Building a Calendar Table using Power Query