

Modern Data Engineering with Microsoft Fabric

Course Description:

This immersive course provides a comprehensive introduction to Microsoft Fabric, focusing on data engineering experiences, Apache Spark, Delta Lakes, and cloud-scale analytics with Azure Databricks. Participants will gain hands-on experience through practical labs and use cases, learning how to manage data, optimize performance, and integrate various tools and platforms. By the end of this course, attendees will be equipped with the knowledge and skills to effectively implement and manage data engineering solutions using Microsoft Fabric and Azure Databricks.

Duration: 3 days

Pre-requisites

- Basic understanding of data engineering concepts
- Familiarity with cloud computing and data platforms
- Experience with programming and scripting languages (e.g., Python, SQL)

Target Audience

- Data Engineers
- Data Scientists
- IT Professionals
- Cloud Architects
- Anyone interested in learning about Microsoft Fabric and Azure Databricks

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Day 1: Introduction to Microsoft Fabric

- Overview of Microsoft Fabric
- Microsoft Fabric Terminology
- Copilot in Microsoft Fabric
- Microsoft Fabric settings

- Working with Workspaces
- Discovering data in OneLake and data hub
- Managing a Workspace with Git
- Getting started with Data Engineering Experiences using Microsoft Fabric
 - Overview of Data Engineering in Microsoft Fabric
 - Working with Lakehouse
 - Data Factory in Microsoft Fabric
 - Working with Data Pipelines in Microsoft Fabric
 - Ingesting Data with Dataflows Gen2
- Hands on labs
 - Use Case 1: Creating a Lakehouse, ingesting sample data and building a report

Day 2: Data Engineering using Apache Spark, Delta Lakes and Notebooks

- Introduction to Spark Compute in Microsoft Fabric
- Apache Spark Job Definition
- Apache Spark Monitoring in Microsoft Fabric
- Delta Lake Tables Optimization and V-Order
- Working with Fabric Notebooks
- Synapse Visual Studio Code Extension
- API for GraphQL and User Data Functions (UDF)
- Spark Administration Settings
- Hands on labs
 - Use Case 2: Analyzing Data with Apache Spark
 - Use Case 3: A Data Factory Solution for Moving and Transforming Data with Dataflows and Data Pipelines

Day 3: Cloud Scale Analytics with Azure Databricks

- Azure Databricks – A Data Intelligent Platform
- Integrating Microsoft Fabric with Azure Databricks
 - Data Governance with Unity Catalog

- Unity Catalog Integration
 - AI Capabilities within Azure Databricks
- Azure Databricks Data Engineering
- Hands on labs
 - Use Case 4: Modern Analytics with Azure Databricks and Microsoft Fabric