



# MICROSOFT FABRIC DATA ENGINEER TRAINING

Master end-to-end data engineering with **Microsoft Fabric** – From Ingestion to Insight



COMPLETE COURSE COVERAGE

|                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div style="background-color: #e6f2ff; padding: 5px; text-align: center; font-weight: bold;">1</div> <h3 style="margin: 0;">MICROSOFT FABRIC OVERVIEW</h3> <ul style="list-style-type: none"> <li>What is Microsoft Fabric?</li> <li>Fabric Architecture</li> <li>Key Features &amp; Benefits</li> </ul>                                          | <div style="background-color: #e6f2ff; padding: 5px; text-align: center; font-weight: bold;">2</div> <h3 style="margin: 0;">DATA INGESTION &amp; MOVEMENT</h3> <ul style="list-style-type: none"> <li>Ingest Data with Pipelines</li> <li>Copy Data Tool</li> <li>Shortcuts &amp; OneLake Integration</li> </ul>                           | <div style="background-color: #e6f2ff; padding: 5px; text-align: center; font-weight: bold;">3</div> <h3 style="margin: 0;">DATA STORAGE WITH ONELAKE</h3> <ul style="list-style-type: none"> <li>OneLake Architecture</li> <li>Data Lakehouse</li> <li>File Formats (Parquet, CSV, JSON)</li> <li>Medallion Architecture</li> </ul> | <div style="background-color: #e6f2ff; padding: 5px; text-align: center; font-weight: bold;">4</div> <h3 style="margin: 0;">DATA ENGINEERING WITH NOTEBOOKS</h3> <ul style="list-style-type: none"> <li>Notebooks in Fabric</li> <li>PySpark Essentials</li> <li>Data Transformation</li> <li>Reusability with Notebook Utilities</li> </ul> |
| <div style="background-color: #fff2cc; padding: 5px; text-align: center; font-weight: bold;">5</div> <h3 style="margin: 0;">DATA FLOW GEN 2</h3> <ul style="list-style-type: none"> <li>Data Wrangling</li> <li>Data Transformation</li> <li>Reference &amp; Parameters</li> </ul>                                                                | <div style="background-color: #fff2cc; padding: 5px; text-align: center; font-weight: bold;">6</div> <h3 style="margin: 0;">DELTA LAKE IN MICROSOFT FABRIC</h3> <ul style="list-style-type: none"> <li>ACID Transactions</li> <li>Time Travel</li> <li>Optimize &amp; Vacuum</li> <li>Schema Enforcement</li> </ul>                        | <div style="background-color: #fff2cc; padding: 5px; text-align: center; font-weight: bold;">7</div> <h3 style="margin: 0;">DATA WAREHOUSE IN FABRIC</h3> <ul style="list-style-type: none"> <li>Warehouse Overview</li> <li>Tables &amp; Views</li> <li>SQL Endpoints</li> <li>Performance Optimization</li> </ul>                  | <div style="background-color: #fff2cc; padding: 5px; text-align: center; font-weight: bold;">8</div> <h3 style="margin: 0;">REAL TIME ANALYTICS</h3> <ul style="list-style-type: none"> <li>Real-Time Intelligence</li> <li>KQL Databases</li> <li>Eventstreams</li> <li>Real-time Dashboards</li> </ul>                                     |
| <div style="background-color: #f4cccc; padding: 5px; text-align: center; font-weight: bold;">9</div> <h3 style="margin: 0;">DATA INTEGRATION &amp; ORCHESTRATION</h3> <ul style="list-style-type: none"> <li>Pipelines in Fabric</li> <li>Triggers &amp; Scheduling</li> <li>Monitoring &amp; Alerts</li> <li>End-to-End Orchestration</li> </ul> | <div style="background-color: #f4cccc; padding: 5px; text-align: center; font-weight: bold;">10</div> <h3 style="margin: 0;">SECURITY &amp; GOVERNANCE</h3> <ul style="list-style-type: none"> <li>Microsoft Entra ID Integration</li> <li>Row Level Security (RLS)</li> <li>Workspace Roles</li> <li>Data Governance in Fabric</li> </ul> | <div style="background-color: #f4cccc; padding: 5px; text-align: center; font-weight: bold;">11</div> <h3 style="margin: 0;">MONITORING &amp; MANAGEMENT</h3> <ul style="list-style-type: none"> <li>Monitoring Pipelines</li> <li>Notebook Monitoring</li> <li>Capacity Metrics App</li> <li>Logging &amp; Diagnostics</li> </ul>   | <div style="background-color: #f4cccc; padding: 5px; text-align: center; font-weight: bold;">12</div> <h3 style="margin: 0;">END TO END PROJECT</h3> <ul style="list-style-type: none"> <li>Build Real-world Project</li> <li>Medallion Architecture</li> <li>Ingestion to Reporting</li> <li>Best Practices</li> </ul>                      |

**WHO SHOULD JOIN?**

- Aspiring Data Engineers
- ETL Developers
- Data Professionals
- Anyone looking to build a career with Microsoft Fabric

**WHY CHOOSE THIS COURSE?**

- Industry Expert Trainers
- Hands-on Learning
- Real-world Projects
- Up-to-date with Latest Features
- Job-oriented Curriculum

**WHAT YOU WILL GAIN?**

- Strong Data Engineering Skills
- Hands-on Microsoft Fabric Experience
- Build Scalable Data Solutions
- Career Growth & Opportunities

**CERTIFICATION**

Get Microsoft Fabric Data Engineer Training Completion Certificate from SQL School



**BECOME A JOB-READY DATA ENGINEER**  
with **Microsoft Fabric**



End-to-End Learning



Hands-on Notebooks



OneLake Experience



Delta Lake Power



Real-time Analytics



Secure & Governed



Job Opportunities

LEARN • PRACTICE • BUILD • SUCCEED

Thank you for contacting our **SQL School**. I am **Mr. Sai Phanindra**, trainer for this **Fabric Data Engineer** Course. With over 20 years of experience in Database Technologies, Fabric Data Engineering, Business Intelligence, and Data Warehousing, I provide 100% practical, step-by-step training with real-world projects and industry best practices.

Let's Connect on LinkedIn: [linkedin.com/in/saiphonindra/](https://www.linkedin.com/in/saiphonindra/)

### Fabric Data Engineering – 100% Practical Training includes:

- ✓ 150+ Hands-on Labs
- ✓ End-to-End Projects
- ✓ 100+ Interview Questions
- ✓ DP-700 Certification Support
- ✓ Resume Building
- ✓ LinkedIn Profile Optimization
- ✓ Mock Interviews
- ✓ Lifetime Recordings
- ✓ Placement Assistance
- ✓ AI + Copilot
- ✓ GitHub Portfolio
- ✓ Real Enterprise Architecture

**This hands-on Fabric Data Engineer Training program is divided into 6 comprehensive modules:**

**Module 1: SQL Server (MSSQL) & T-SQL**

- SQL Queries
- Performance Tuning

**Module 2: Fabric Data Engineering**

**Part 1:** Fabric Data Factory, Warehouse (DWH)

**Part 2:** Fabric Data Flow, LakeHouse, KQL, Mirroring

**Part 3:** Fabric Notebooks, AI

**Module 3: DevOps for Fabric Data Engineering**

- GIT, GITHUB
- End-to-End Integration Solutions

**Module 4: Real-Time Project**

- End-to-End Fabric Data Engineering Implementation
- Azure Synapse Migrations

**Module 5: Data Engineer Certifications**

- DP-700 Exam Guidance

**Total Program Duration:**



**2.5 Months Course**



**100% Practical & Realtime**



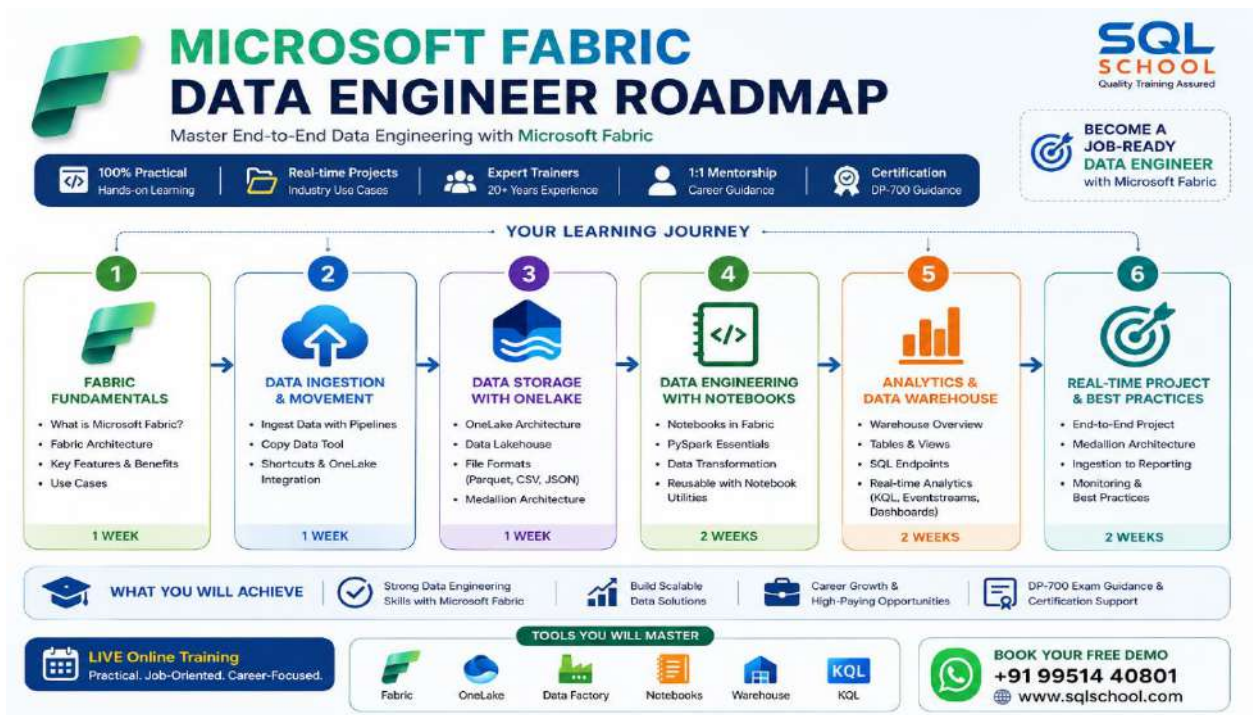
**Call us for Free Demo: +91 9951440801, +91 9666640801**

**Who Should Join?**

- Freshers
- SQL Developers
- ETL Developers
- BI Developers
- Database Administrators
- Data Analysts
- Software Engineers

**Prerequisites**

- No experience required
- We start from the basics and build your skills step by step.



## 🔑 Detailed Course Content 🔑

### Module 1: SQL Server TSQL (MS SQL) Queries

#### Ch 1: SQL Database Job Roles

- ✓ Introduction to Data
- ✓ Database Intro, Types
- ✓ OLTP, DWH, OLAP
- ✓ DBMS Concepts
- ✓ Fabric Data Engineer Job Roles

#### Ch 2: Database Intro & Installations

- ✓ SQL Server Installations
- ✓ Instance Concepts
- ✓ Authentication Types
- ✓ Authentication Modes
- ✓ SSMS Tool Installation
- ✓ Connections, Authentications

#### Ch 3: SQL Basics V1 (Commands)

- ✓ Creating Databases (GUI)
- ✓ Creating Tables, Columns (GUI)
- ✓ SQL Basics (DDL, DML, etc..)
- ✓ Creating Databases, Tables
- ✓ Data Inserts (GUI, SQL)
- ✓ Basic SELECT Queries

#### **Ch 4: SQL Basics V2 (Commands, Operators)**

- ✓ DDL: Create, Alter, Drop, Add
- ✓ DML: Insert, Update, Delete
- ✓ DQL: Select, Fetch
- ✓ SQL Operators
- ✓ Special Operators

#### **Ch 5: Excel Data Imports**

- ✓ Data Imports with Excel
- ✓ Order By: Asc, Desc
- ✓ Order By with WHERE
- ✓ TOP & OFFSET
- ✓ UNION, UNION ALL

#### **Ch 6: Schemas & Batches**

- ✓ Schemas: Creation, Usage
- ✓ Schemas & Table Grouping
- ✓ Real-world Banking Database
- ✓ 2 Part, 3 Part & 4 Part Naming
- ✓ Batch Concept & "Go" Command

#### **Ch 7: Constraints, Keys & RDBMS**

- ✓ Null, Not Null Constraints
- ✓ Unique Key Constraint
- ✓ Primary Key Constraint
- ✓ Foreign Key & References
- ✓ Default Constraint & Usage
- ✓ DB Diagrams & ER Models

#### **Ch 8: Normal Forms & ERD**

- ✓ Normal Forms: 1 NF, 2 NF
- ✓ 3 NF, BCNF and 4 NF
- ✓ Self Referencing Keys
- ✓ Cascading Keys
- ✓ Database Diagrams

#### **Ch 9: Joins Queries – Level 1**

- ✓ Joins: Table Comparisons
- ✓ Inner Join & Outer Joins
- ✓ Cross Join & Cross Apply
- ✓ Table Combination
- ✓ Table & Column Aliases

#### **Ch 10: Joins Queries – Level 2**

- ✓ Group By & Aggregations
- ✓ Joins with Group By
- ✓ 3 Table, 4 Table Joins

- ✓ Join Queries with Aliases
- ✓ WHERE & HAVING
- ✓ Query Execution Order

#### **Ch 11: Sub Queries**

- ✓ Distinct & Union, Union All
- ✓ Sub Queries Concept
- ✓ Sub Queries & Aggregations
- ✓ Joins with Sub Queries
- ✓ Correlated Queries

#### **Ch 12: Views & Data Analytics**

- ✓ Views: Realtime Usage
- ✓ Storing SELECT in Views
- ✓ DML, SELECT with Views
- ✓ RLS: Row Level Security
- ✓ Data Analytics with Excel
- ✓ Important System Views

#### **Ch 13: Stored Procedures – Level 1**

- ✓ Stored Procedures: Realtime Use
- ✓ Procedures with SELECT
- ✓ System Stored Procedures
- ✓ Metadata Access with SPs
- ✓ Stored Procedures, Tuning

#### **Ch 14: Stored Procedures – Level 2**

- ✓ Merge Statement
- ✓ Upsert Operations with Merge
- ✓ Merge with OLTP & DWH
- ✓ Matched and Not Matched
- ✓ Merge Statement inside SPs

#### **Ch 15: Functions – Level 1**

- ✓ Using Defined Functions (UDF)
- ✓ Scalar Functions in Real-world
- ✓ Table Valued Functions
- ✓ Parameterized Queries
- ✓ Returns and Return
- ✓ SP Versus Functions

#### **Ch 16: Functions – Level 2**

- ✓ Aggregated Functions
- ✓ Date & Time Functions
- ✓ String Functions
- ✓ Window Functions
- ✓ Rank, Row\_Number

- ✓ DenseRank, Partition By

### Ch 17: Triggers & Automations

- ✓ Need for Triggers in Real-world
- ✓ DDL & DML Triggers
- ✓ For / After Triggers
- ✓ Instead Of Triggers
- ✓ Memory Tables with Triggers
- ✓ Disabling DMLs & Triggers

### Ch 18: Transactions & ACID

- ✓ Transaction Concepts in OLTP
- ✓ Auto Commit Transaction
- ✓ Explicit Transactions
- ✓ COMMIT, ROLLBACK
- ✓ Lock Hints & Query Blocking
- ✓ READPAST, LOCKHINT

### Ch 19: Indexes Basics, Tuning

- ✓ Indexes & Tuning
- ✓ Clustered Index, Primary Key
- ✓ Non Clustered Index & Unique
- ✓ Creating Indexes Manually
- ✓ Composite Keys, Query Optimizer
- ✓ Composite Indexes & Usage

### Ch 20: CTEs & Tuning

- ✓ Common Table Expression
- ✓ Creating and Using CTEs
- ✓ CTEs, In-Memory Processing
- ✓ IIF(), CASE Statement
- ✓ Cube( ) and Rollup( )
- ✓ Sub Totals & Grand Totals
- ✓ Grouping( ) & Usage

### Ch 21: Data Types & Variables

- ✓ Integer Data Types
- ✓ Character, MAX Data Types
- ✓ Decimal & Money Data Types
- ✓ Boolean & Binary Data Types
- ✓ Date and Time Data Types
- ✓ SQL\_Variant Type
- ✓ Variables in SQL
- ✓ Cursor Variable & Fetch

### Ch 22: Temp Tables

- ✓ Local Temp Tables

- ✓ Global Temp Tables
- ✓ Testing Temp Tables
- ✓ SELECT..INTO Statement
- ✓ Bulk Copy Operations

### Ch 23: SQL Server Architecture

- ✓ Network Protocols
- ✓ Query Execution Engine
- ✓ Parser, Compiler, Checkpoint
- ✓ SQL Manager, DB Manager
- ✓ Storage Engine, Locks
- ✓ SQL OS Components

### Ch 24: Real-Time SQL Server Case Studies

- ✓ Healthcare Management System
  - Patient Records Management
  - Doctor Appointment Scheduling
  - Billing & Insurance Processing
  - Medical Reports Analysis
- ✓ E-Commerce Database
  - Customer & Product Management
  - Order Processing
  - Inventory Tracking
  - Sales Reporting
- ✓ Banking & Financial Systems
  - Customer Accounts
  - Transaction Processing
  - Loan Management
  - Fraud Detection Queries

## Module 2: Fabric Data Engineering

### Part 1: Fabric Concepts, DWH & Fabric Data Factory

#### Ch 1: Fabric Introduction

- ✓ Need for Fabric, Big Data
- ✓ Fabric Data Engineering Model
- ✓ Fabric Components (Items)
- ✓ Microsoft Fabric: Advantages
- ✓ Cloud Warehouse & AI
- ✓ AI with CoPilot
- ✓ Azure Versus Fabric DWH

#### Ch 2: Fabric Account, Workspace

- ✓ Need for Fabric Workspace
- ✓ Workspace Creation Process
- ✓ Pins and New Items
- ✓ Item Categorization
- ✓ ETL, Storage, Analytical
- ✓ Streaming, Monitoring
- ✓ Compute & Separation

### **Ch 3: Fabric OneLake Architecture**

- ✓ Intelligent Data Foundation
- ✓ Polaris Distributed Engine
- ✓ Stateless & Stateful
- ✓ Cache, Metadata, Xact & Data
- ✓ Fabric Tasks, Inputs & DAG
- ✓ State Machine & Statistics
- ✓ Hot Spot Recovery

### **Ch 4: Fabric Warehouse**

- ✓ Fabric Warehouse Creation
- ✓ Fabric Warehouse Features
- ✓ Fabric Warehouse Properties
- ✓ Fabric Warehouse Limitations
- ✓ DWH Internal Operations
- ✓ Default Schemas & Objects
- ✓ SSMS Connections

### **Ch 5: Fabric Data Types**

- ✓ Realtime use of Fabric Houses
- ✓ Exact, Approximate Numbers
- ✓ Date and Time Data Types
- ✓ Fixed & Variable Length
- ✓ Binary & String Data Types
- ✓ Fabric Type Limitations
- ✓ Save As table, Save As View

### **Ch 6: Fabric Caching**

- ✓ Fabric Caching Process
- ✓ In-memory Cache, Disk Cache
- ✓ Cache Types: LRU /MRU
- ✓ Cold Cache / Cold Run
- ✓ Realtime use of Caching
- ✓ Performance Advantages
- ✓ Warehouse Optimizations

### **Ch 7: Fabric Statistics**

- ✓ Query Engine Options
- ✓ Statistics Types

- ✓ Leverage Statistics
- ✓ Auto, Manual Statistics
- ✓ Update Statistics
- ✓ Statistics Consistency
- ✓ Statistics Lists & Reports

#### **Ch 8: Time Travel**

- ✓ Continuous Data Protection
- ✓ Data Storage, Retention
- ✓ FOR TIMESTAMP AS OF
- ✓ Time Travel Scenarios
- ✓ Time Travel Implementation
- ✓ Time Travel on Queries
- ✓ Time Travel Limitations

#### **Ch 9: Zero Copy Cloning**

- ✓ User Layer, Storage Layer
- ✓ Cloning & Parquet Files
- ✓ Synapse Data Warehouse
- ✓ Data History Retention
- ✓ Point In Time , Schema Level
- ✓ Zero Copy Cloning Limitations

#### **Ch 10: Fabric Security**

- ✓ Workspace Security
- ✓ Warehouse Security
- ✓ Item Security & Roles
- ✓ Adding AD Users
- ✓ Item Security Limitations
- ✓ MFA & Client Security

#### **Ch 11: Fabric Copy Job**

- ✓ ETL Implementation Options
- ✓ Copy Job Item
- ✓ Data Loads with Copy Job
- ✓ Full Loads
- ✓ Testing Copy Jobs

#### **Ch 12: Fabric Copy Job**

- ✓ Incremental Loads with Copy Job
- ✓ Business Key Concept
- ✓ DWH: Data Storage
- ✓ Testing Initial Loads
- ✓ Testing Incremental Loads
- ✓ Copy Job Limitations

#### **Ch 13: Fabric Data Factory**

- ✓ Need for Fabric Data Factory
- ✓ ETL Operations in FDF
- ✓ Data Sources, Transformations
- ✓ Activities and Connections
- ✓ Data Destinations (Sinks)
- ✓ Creating Pipelines

#### **Ch 14: Fabric Pipelines Design**

- ✓ Creation Options for Pipelines
- ✓ Azure SQL DB Data Loads
- ✓ Creating Data Sets
- ✓ Copy Command Usage
- ✓ Run ID & Monitoring
- ✓ Pipeline Creation, Verification

#### **Ch 15: Data Loads with Azure**

- ✓ Azure Data Lake Storage (ADLS)
- ✓ Azure BLOB Containers
- ✓ Fabric Data Loads From Azure Files
- ✓ Fabric Warehouse with Azure
- ✓ Run IDs and Activity
- ✓ Compressions & Advantages

#### **Ch 16: ETL Staging**

- ✓ Staging: Advantages
- ✓ Caching & Storing Concept
- ✓ Staging Types in Fabric
- ✓ Workspace & External
- ✓ External Stages in Pipelines
- ✓ Pipeline Trigger, Monitor

#### **Ch 17: Fabric Aggr Data Loads**

- ✓ Aggregation Scenarios
- ✓ Creating Views in TSQL
- ✓ Using Views in FDF Pipelines
- ✓ Using Pipeline Editor
- ✓ Data Loads to Warehouse
- ✓ Pipeline Verifications

#### **Ch 18: Fabric Incremental Loads - 1**

- ✓ Upsert (Incremental Loads)
- ✓ Business Key Concept
- ✓ SCD: Slowly Changing Dimension
- ✓ Full Loads Vs Incr Loads
- ✓ Testing Incrementing Loads
- ✓ Pipeline Execution Tests

## **Ch 19: Fabric Incremental Loads - 2**

- ✓ Control Tables
- ✓ Watermark Columns
- ✓ Lookup Activity
- ✓ Stored Procedure Activity
- ✓ Parameters & Runs
- ✓ Concurrency & Batch Count

## **Ch 20: OnPrem Gateways**

- ✓ Need for On-Premise Gateway
- ✓ Installing & Configuring
- ✓ Authentication, Usage
- ✓ On-Premise Connections
- ✓ Pipelines for Data Loads
- ✓ Warehouse Data Storage
- ✓ Data Refresh with Gateways

## **Ch 21: Data Factory Pipeline Tuning**

- ✓ Intelligent Throughput
- ✓ DOCP & Optimizations
- ✓ Staging & In-Memory
- ✓ Reliable Logging
- ✓ Spark Compute Options
- ✓ Concurrent Connections
- ✓ ETL Partitions in Real-world

## **Part 2: Fabric Data Flow, Lake House**

### **Ch 1: Fabric Lakehouse**

- ✓ Fabric Lakehouse Architecture
- ✓ Files and Tables Storage
- ✓ Direct Lake & AI
- ✓ Creating Lakehouse
- ✓ Azure SQL Database Source
- ✓ UI: Limitations

### **Ch 2: Lakehouse File Loads**

- ✓ Creating Lakehouse
- ✓ Incremental Refresh
- ✓ Computed Tables
- ✓ Reusable Transformations
- ✓ Scheduling
- ✓ Monitoring
- ✓ Best Practices

### **Ch 3: Power Query Level 1**

- ✓ Power Query Concept

- ✓ Fabric Lake House
- ✓ ETL, ELT Process with AI
- ✓ Data Combine: Union, Append
- ✓ Duplicate / Reference Queries
- ✓ Warehouse Data Loads

#### **Ch 4: Power Query Level 2**

- ✓ Table Transformations
- ✓ Group By, Transpose
- ✓ Header Row Promotion
- ✓ Reverse Rows, Count Rows
- ✓ Any Column Transformations
- ✓ Data Type, Fill & Pivot

#### **Ch 5: Power Query Level 3**

- ✓ Text Transformations
- ✓ Format, SubString
- ✓ Number Transformations
- ✓ Date Time Transformations
- ✓ Add Column Transformation

#### **Ch 6: Power Query Level 4**

- ✓ Column From Examples
- ✓ Conditional Column
- ✓ Index Transformation
- ✓ Duplicate Rows, Errors
- ✓ Advanced Editor

#### **Ch 7: Power Query Level 5**

- ✓ ETL Parameters
- ✓ Big Data Access
- ✓ Static Parameters
- ✓ Dynamic Parameters
- ✓ List Queries
- ✓ M Language Expressions

#### **Ch 8: Stream House, KQL**

- ✓ Need for Stream House
- ✓ Auto creation of KQL
- ✓ Manual KQL Databases
- ✓ Verification & Usage
- ✓ Differences with Warehouse
- ✓ Differences with Lakehouse

#### **Ch 9: KQL Query Sets**

- ✓ KQL Database Extraction
- ✓ File Imports - on Premises

- ✓ Metadata Edit Options
- ✓ Query Analytics
- ✓ Exports, Visualizations
- ✓ Query Sets Versus Notebooks

## **Ch 10: Fabric Data Activator**

- ✓ Need for Alerts, Notifications
- ✓ Fabric Data Activator Options
- ✓ Alert Conditions, Thresholds
- ✓ Email Notifications
- ✓ Events & Notifications
- ✓ Edit / Enable / Disable

## **Ch 11: Mirror Database**

- ✓ Need for Mirror Databases
- ✓ Configure Mirror Databases
- ✓ Data Replication
- ✓ Schema Replication
- ✓ Connections & Usage
- ✓ Mirror DB Practical uses

## **Part 3: Python, PySpark, DWH**

### **Ch 1: Fabric Notebooks**

- ✓ Need for Notebooks
- ✓ Fabric Notebook Types
- ✓ Creating Environment
- ✓ Creating Spark Clusters
- ✓ Standard, High Concurrency
- ✓ Magic Command
- ✓ Freeze Cells

### **Ch 2: Spark SQL - 1**

- ✓ Spark SQL Notebooks
- ✓ Creating Schemas
- ✓ Delta Tables
- ✓ Parquet Tables
- ✓ Spark Joins
- ✓ Spark SQL Aggregations
- ✓ Data Partitioning
- ✓ Union, Views in Spark
- ✓ Dropping Objects

### **Ch 3: Spark SQL - 2**

- ✓ Math, Sort Functions
- ✓ String, Date Time Functions

- ✓ Conditional Statements
- ✓ Data Recovery & Undo
- ✓ Version Number
- ✓ Describe Extended

#### **Ch 4: Python Intro & Print**

- ✓ Python Introduction
- ✓ Python Versions
- ✓ Python in Spark (PySpark)
- ✓ Python Print()
- ✓ Single, Multiline Statements

#### **Ch 5: Python Variables**

- ✓ Defining Variables
- ✓ Using Variables
- ✓ Printing Variables
- ✓ Display Variables
- ✓ Variable Types
- ✓ Multi Value Variables
- ✓ If ... Else Statement

#### **Ch 6: Python Operators**

- ✓ Integer Operators
- ✓ String Operators
- ✓ Arithmetic Operators
- ✓ Assignment Operators
- ✓ Comparison Operators
- ✓ Formatted Strings
- ✓ Indexing Operators
- ✓ ELIF, ELSE IF Statements

#### **Ch 7: Python Data Types**

- ✓ Python Data Types
- ✓ Integer / Int Data Types
- ✓ Float, String Data Types
- ✓ List Data Type
- ✓ List Items, Indexes
- ✓ Tuple Data Type
- ✓ Dictionary Data Type

#### **Ch 8: Python Dataframes**

- ✓ Pandas Module (Python)
- ✓ Dataframes from Lists
- ✓ Dataframe from Dict
- ✓ Pandas Dataframes
- ✓ Dataframe print, display

#### **Ch 9: Python Dataframes Transformations**

- ✓ Append

- ✓ Append with NoIndex
- ✓ Merge with ON, KIND
- ✓ spark.read.csv()
- ✓ spark.read.format()

### **Ch 10: Medallion Architecture**

- ✓ Bronze, Gold and Silver
- ✓ Raw Data
- ✓ Data Preparation (Prepping)
- ✓ Temporary Views
- ✓ Big Data Analytics

### **Ch 11: PySpark: Medallion Loads 1**

- ✓ Reading from Volumes
- ✓ Dataframes, Temp Views
- ✓ Data Prep (Silver)
- ✓ Filtering DataFrame Records
- ✓ Removing Duplicate Records
- ✓ Sorting and Limiting Records
- ✓ Spark SQL Dataframes
- ✓ Gold Layer Implementation
- ✓ Testing Aggregated Loads

### **Ch 12: PySpark: Medallion Loads 2**

- ✓ Azure SQL DB Connections
- ✓ SQL Queries in PySpark
- ✓ Data Prep (Silver)
- ✓ Filtering Null Values
- ✓ Grouping and Aggregating
- ✓ Spark SQL Dataframes
- ✓ Gold Layer Implementation
- ✓ Notebook Utilities

### **Ch 13: PySpark: SCD**

- ✓ Slowly Changing Dimension
- ✓ Merge Into Statement
- ✓ Error Handling
- ✓ Merge with OLTP Data Sources
- ✓ Change Data Feed

### **Ch 14: PySpark: Widgets**

- ✓ Notebook Parameters
- ✓ Text Widgets
- ✓ Manual Executions
- ✓ Parameters & JSON
- ✓ Notebook Schedules, Retry
- ✓ Modular Notebook Design
- ✓ Notebook Chaining

### **Ch 15: LakeHouse Architecture Optimizations**

- ✓ Delta Log
- ✓ Delta Versioning
- ✓ Partition Strategy
- ✓ Small File Problem
- ✓ Adaptive Query Execution
- ✓ Explain Plan, Spark UI
- ✓ mssparkutils

## **Ch 16: LakeHouse Optimizations**

- ✓ VACUUM, OPTIMIZE
- ✓ ZORDER
- ✓ Broadcast Join
- ✓ Repartition, Coalesce
- ✓ Cache, Persist
- ✓ Shuffle Optimization

## **Ch 17: Semantic Models**

- ✓ Creating Semantic Model
- ✓ Spark SQL: DDL, DML
- ✓ Adding References, Keys
- ✓ Using Model Layouts

## **Ch 18: Fabric Security**

- ✓ Workspace Security
- ✓ Lakehouse Security
- ✓ Notebook Security
- ✓ Security Principals
- ✓ Authentication Options
- ✓ MFA (Multi Factor Authentication)

## **Module 3: DevOps for Data Engineers, AI**

### **Ch 1: GitHub Concepts**

- ✓ Creating Github Account
- ✓ GIT Project Concept
- ✓ GIT Project Creation
- ✓ GIT: Main, Branches
- ✓ GIT Credentials
- ✓ Connecting with ADF
- ✓ Connecting with Databricks

### **Ch 2: DevOps For Fabric Data Engineers**

- ✓ Fabric Git Integration
- ✓ Git Branches
- ✓ Workspace Sync
- ✓ Commit

- ✓ Pull
- ✓ Merge
- ✓ Conflict Resolution

### Ch 3: Fabric AI

- Copilot
- AI Functions
- AI Skills
- AI Prompt Builder
- AI Insights
- Semantic Search

## Module 4: Retail & E-Commerce Analytics Platform using Microsoft Fabric

### Project Objective:

Build a complete enterprise-grade Data Engineering solution using Microsoft Fabric that ingests data from multiple source systems, transforms it using Medallion Architecture, stores it in OneLake and Warehouse, and serves analytics to Power BI dashboards.

Students will implement the complete project exactly as done in enterprise organizations.

### Business Scenario

A multinational e-commerce company wants to centralize sales, customers, products, orders, inventory, logistics and payment data into Microsoft Fabric.

Current Problems:

- Data scattered across multiple systems
- Manual reporting
- Slow dashboards
- No real-time insights
- No centralized data platform

### Goal:

Create a scalable Fabric Data Platform capable of processing millions of records daily.

### Technologies Used:

- Fabric Data Factory (ADF)
- Fabric One Lake
- Fabric Warehouse
- Fabric LakeHouse
- Fabric StreamHouse
- Data Lake Gen2
- Semantic Models
- REST APIs
- Azure SQL Database
- Azure Data Lake
- CoPilot (AI)

### **Skills Gained:**

- Fabric Pipelines
- Fabric Notebooks
- Fabric Data Flow
- Semantic Models
- Medallion Architecture (Bronze/Silver/Gold)
- Real-Time Industry Experience
- Fabric APIs (REST, Workspace)

### **Components For Project (From Resume Perspective):**

- Source Systems
- Bronze
- Silver
- Gold
- ADF Pipelines
- Synapse Analytics
- PySpark
- Power BI Reporting
- Monitoring
- Alerting
- CI/CD
- Deployment
- End to End Integrations

## **Module 5: Fabric Data Engineer Certification**

### **Fabric Data Engineer (DP 700)**

- Exam Q & A, Scenarios
- 150+ practice questions
- Mock tests
- Case studies
- Scenario-based labs
- Weekly DP-700 quizzes

### **After Completing This Course, You Will Be Able To**

- ✓ Design Enterprise Data Engineering Architectures
- ✓ Build End-to-End ETL/ELT Pipelines
- ✓ Develop Scalable Microsoft Fabric Solutions
- ✓ Implement Medallion Architecture (Bronze, Silver, Gold)
- ✓ Build Fabric Data Factory Pipelines
- ✓ Develop Spark SQL & PySpark Notebooks
- ✓ Create Lakehouse & Warehouse Solutions
- ✓ Implement Dataflow Gen2 Transformations
- ✓ Optimize Performance using Delta Lake Best Practices

- ✓ Integrate Git & CI/CD Pipelines
- ✓ Implement Enterprise Security & Governance
- ✓ Monitor, Troubleshoot & Optimize Fabric Workloads
- ✓ Build Interactive Power BI Reports & Semantic Models
- ✓ Successfully Prepare for the DP-700 Certification

### Career Opportunities

After completing this course, you can confidently apply for roles such as:

- Microsoft Fabric Data Engineer
- Azure Data Engineer
- Data Engineer
- Cloud Data Engineer
- ETL Developer
- Analytics Engineer
- Data Platform Engineer
- BI Developer
- Data Warehouse Developer
- Big Data Engineer
- Microsoft Fabric Consultant
- Data Architect (with experience)

### Why SQL School?

At SQL School, we believe that learning should go beyond theory.

Our mission is to transform beginners and working professionals into confident, job-ready Data Engineers.

With over 20+ years of industry expertise and 1,00,000+ professionals trained, we are committed to helping you build a successful career in the ever-growing world of Data Engineering.

### Your Success Starts Here

Learn. Practice. Build. Deploy. Get Certified. Get Hired.

Join SQL School and become a Job-Ready Microsoft Fabric Data Engineer equipped with the practical skills, real-world experience, and confidence needed to succeed in today's data-driven industry.

We look forward to welcoming you to SQL School and being a part of your career success story!



## MICROSOFT FABRIC DATA ENGINEER TRAINING

Master end-to-end data engineering  
with **Microsoft Fabric**

**SQL  
SCHOOL**

Quality Training Assured

*Thank You*  
★ & BEST WISHES ★

**Your Data Engineering Journey  
Starts Today!**



SCAN TO  
**REGISTER**  
FOR A FREE DEMO



VISIT OUR WEBSITE  
[www.sqlschool.com](http://www.sqlschool.com)



CALL / WHATSAPP  
**+91 99514 40801**



LET'S CONNECT ON LINKEDIN  
[linkedin.com/in/saiphanindra](https://linkedin.com/in/saiphanindra)



EMAIL US  
[training@sqlschool.com](mailto:training@sqlschool.com)



150+  
Hands-on  
Labs



End-to-End  
Enterprise  
Projects



DP-700  
Certification  
Support



Placement  
Assistance



Lifetime  
Recordings



AI + Copilot  
Integration

**LEARN • PRACTICE • BUILD • SUCCEED**

Join SQL School and become a Job-Ready Microsoft Fabric Data Engineer  
Build Skills. Build Projects. Build Your Career.



Industry Best  
Practices



Real-time  
Learning



Expert  
Trainers



Trusted by  
10,00,000+ Learners



High-Paying  
Career

**Thank You & Best Wishes!**

**"Your Data Engineering Journey Starts Today!"**



[www.sqlschool.com](http://www.sqlschool.com)



**+91 99514 40801**

[www.sqlschool.com](http://www.sqlschool.com) For Free Demo: +91 9666 640801, +91 9666 440801