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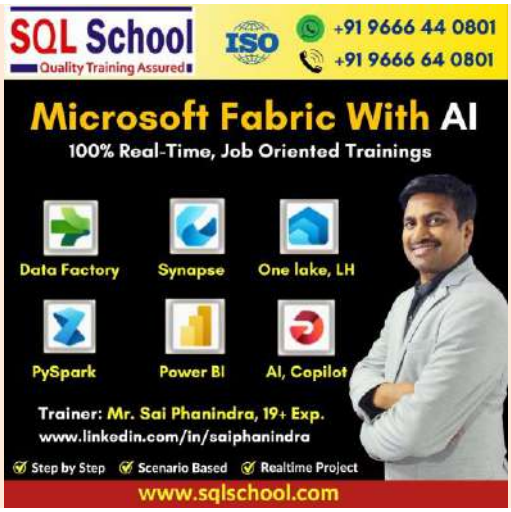
Fabric Data Engineering with AI

Thank you for contacting our **SQL School**. I am **Mr. Sai Phanindra**, trainer for this **Fabric Data Engineering** Course. With 19+ Years of technical expertise exclusively on Database and Azure, BI Technologies, I assure you 100% Practical, Step-by-Step Classes for this in-depth Azure Data Engineer course. My Profile @ linkedin.com/in/saiphanindra/

Module 1: Fabric Data Engineer, AI
In this course, we practically learn & implement ETL, ELT, DWH, FDF, LakeHouse, OneLake, StreamHouse, KQL, Data Flow Gen 1, Data Flow Gen 2, Data Lake, Python ETL, PySpark, Scala, Big Data Analytics and more with Medallion Architecture. This course includes various structured and unstructured data sources to implement Upserts, SCD, CDC and more Big Data Techniques .. !

This module includes one **Realtime Project** For your resume in **Ecommerce** Domain



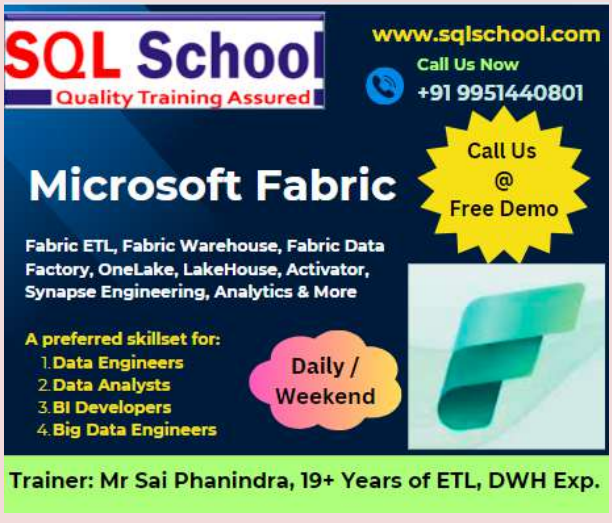
Fabric Data Engineer with AI:

➢ **Module 1: Fabric Data Engineer**
6 Weeks; 1 Realtime Project

➢ **Module 2: Azure AI, CoPilot**
3 Weeks; 1 Realtime Case Study

Trainer: linkedin.com/in/saiphanindra/
Trainer Contact: +91 9030040801

This course is very helpful for:
1. Data Engineers
2. ETL Developers
3. BI Developers



🔥 Detailed Course Content 🔥

Module 1: Fabric Data Engineering

Ch 1: Fabric Introduction ✓ Need for Fabric, Big Data ✓ Fabric Data Engineering Model ✓ Fabric Components (Items) ✓ Microsoft Fabric: Advantages ✓ Cloud Warehouse Uses ✓ Benefits of Fabric Over Azure ✓ 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 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	**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	**Ch 6: SSMS Connections** ✓ Warehouse SQL Connection ✓ Database Engine Server ✓ Multi Factor Authentication ✓ Warehouse Artifacts ✓ Executing .SQL Scripts ✓ Testing Fabric Artifacts
Ch 7: 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 8: Fabric Statistics** ✓ Query Engine Options ✓ Statistics Types ✓ Leverage Statistics ✓ Auto, Manual Statistics ✓ Update Statistics ✓ Statistics Consistency ✓ Statistics Lists & Reports	**Ch 9: 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 10: Aggregated Data Store ✓ Options for Data Aggregations ✓ Save As table, Save As View ✓ Single Table Aggregations ✓ Multi Table Aggregations ✓ Dynamic Conditions ✓ Parameterized Aggregations	**Ch 11: 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 12: Fabric Security** ✓ Workspace Security ✓ Warehouse Security ✓ Item Security & Roles ✓ Adding AD Users ✓ Item Security Limitations ✓ MFA & Client Security
Ch 13: Fabric Data Factory ✓ ETL Implementation Options ✓ Need for Fabric Data Factory	**Ch 14: Fabric Pipelines** ✓ Activities and Connections ✓ Gateways & OnPrem Access	**Ch 15: Fabric Pipelines Design** ✓ Creation Options for Pipelines ✓ Azure SQL DB Data Loads

✓ ETL Operations in FDF ✓ Data Sources, Transformations ✓ Data Destinations (Sinks) ✓ Creating Pipelines	✓ Data Sets & Activity Sets ✓ Data Activator & Alerts ✓ Run ID & Monitoring ✓ Pipeline Creation, Verification	✓ Creating Data Sets ✓ RRR Transformations ✓ Copy Command Usage ✓ Internal Staging (Workspace)
Ch 16: 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 17: ETL Staging** ✓ Staging : Advantages ✓ Caching & Storing Concept ✓ Staging Types in Fabric ✓ Workspace & External ✓ External Stages in Pipelines ✓ Compressions & Advantages ✓ Pipeline Trigger, Monitor	**Ch 18: OnPrem Gateways** ✓ Need for On_Premi Gateway ✓ Installing & Configuring ✓ Authentication, Usage ✓ OnPremises Connections ✓ Pipelines for Data Loads ✓ Warehouse Data Storage ✓ Data Refresh with Gateways
Ch 19: Fabric Lakehouse ✓ Need for Fabric Lakehouse ✓ Files and Tables Storage ✓ Data Sources: Parquet Files ✓ Transformation Options ✓ Direct Lake Concepts ✓ Lakehouse Consumption ✓ Lakehouse Real time Use	**Ch 20: Lakehouse File Loads** ✓ Creating Lakehouse ✓ Copy Data Wizard ✓ Azure SQL Database Source ✓ File Data Loads in Lakehouse ✓ Concurrency & Batch Count ✓ Pipeline Execution Tests ✓ Pipeline Monitor Check	**Ch 21: Lakehouse Aggr Loads** ✓ Aggregated Data Store ✓ Plan & Design Aggregations ✓ Testing Aggregations ✓ Pipelines for Data Compute ✓ Data Copy Options ✓ Pipeline Optimizations ✓ Data Loads and Verification
Ch 22: MultiTable Loads in LH ✓ Table Loads Connections ✓ Data Load in Lakehouse ✓ Using Copy Data Wizard ✓ Data Store in Lakehouse ✓ View Run History, Executions ✓ SQL End Points & Access ✓ Lakehouse Schemas	**Ch 23: Lakehouse Visual Queries** ✓ Visual Query Interface ✓ Visual Editor & Tables / Views ✓ Merge, Remove, Sort Tfns ✓ Data Preview, Save As Table ✓ Save As View : Advantages ✓ Using Schemas, Identifiers ✓ TDS Packets & Transfer Units	**Ch 24: File Explorer** ✓ Installing One Lake Explorer ✓ Autocreation of Folders ✓ Workspace Directories ✓ Warehouse Directories, Logs ✓ Lakehouse Folders, Files ✓ Lakehouse Uploads ✓ Explorer Tool Limitations
Ch 25: Power Query Level 1 ✓ Power Query Concept ✓ Need for Power Query ✓ Data Flow Gen 1 ✓ Data Flow Gen 2 ✓ Power Query Items ✓ Differences with Copy Activity ✓ ETL, ELT Process	**Ch 26: Power Query Level 2** ✓ Data Flow Gen2 Operations ✓ PQ Online Editor ✓ Working with Binary Content ✓ Detailed Data Options ✓ Data Cleansing Options ✓ Step Names, Aggregations ✓ Warehouse Data Loads	**Ch 27: Power Query Level 3** ✓ Binding Power Query Steps ✓ Edit / Delete Steps ✓ Optimizing Power Query ✓ ETL & ELT with Power Query ✓ Advanced Editor ✓ M Language Expressions ✓ Duplicate / Reference Queries
Ch 28: Fabric Notebooks	**Ch 29: Spark SQL Notebooks**	**Ch30: PySpark Notebooks**

✓ Need for Notebooks ✓ Fabric Notebook Types ✓ Get / Prep / Analyze ✓ Sessions, Markdown Folding ✓ Standard, High Concurrency ✓ Magic Command ✓ Freeze Cells	✓ Creating Environment ✓ Creating Spark Clusters ✓ Spark Cluster Compute ✓ SQL Analytics in Notebooks ✓ Visual Query Vs SQL ✓ Cell Execution Options ✓ Magic Command Usage	✓ Creating / Using Environment ✓ PySpark Notebook Sessions ✓ Reading Source Data ✓ Data Prep & Aggregations ✓ Data Loads, Analytics ✓ Cell Execution Options ✓ Markdown Cells
Ch 31: StreamHouse, KQL ✓ Need for Stream House ✓ Auto creation of KQL ✓ Manual KQL Databases ✓ Verification & Usage ✓ Differences with Warehouse ✓ Differences with Lakehouse	**Ch 32: KQL Query Sets** ✓ KQL Database Extraction ✓ File Imports - on Premises ✓ Metadata Edit Options ✓ Query Analytics ✓ Exports, Visualizations ✓ Query Sets Versus Notebooks	**Ch 33: Fabric Data Activator** ✓ Need for Alerts, Notifications ✓ Fabric Data Activator Options ✓ Alert Conditions, Thresholds ✓ Email Notifications ✓ Events & Notifications ✓ Edit / Enable / Disable
Ch 34: Model Layouts ✓ Need for Layouts ✓ Creating Model Layouts ✓ Adding Refences, Keys ✓ Power BI Semantic Models ✓ Creating Report Items ✓ Using Power BI Desktop	**Ch 35: Azure Synapse Migrations** ✓ Azure Synapse DWH ✓ Azure Synapse Connections ✓ Migrating to Fabric ✓ Compatibility Checks ✓ Synapse Vs Fabric Warehouse ✓ Fabric DWH Advantages	**Ch 36: DP 700 Exam Guidance**
End to End Realtime Project: Ecommerce Domain		

Module 2: Fabric Data Engineering with AI, CoPilot

Chapter 1: Fundamental AI Concepts

- AI: Artificial Intelligence
- Real-time Implementation
- Understand Computer Vision
- Understand Natural Language Processing
- Document Intelligence and Knowledge Mining
- Understand Generative AI
- Challenges and Risks with AI

- Understand Responsible AI

Chapter 2: Fundamentals of Machine Learning

- Machine Learning Introduction
- Machine Learning Components
- Types of Machine Learning
- Regression, Binary Classification; Multiclass Classification
- Clustering, Deep Learning
- Azure Machine Learning

Chapter 3: Fundamentals of Azure AI services

- AI Services on Azure platform
- Create Azure AI Service Resources
- Use Azure AI services
- Understand Authentication for Azure AI services
- Exercise - Explore Azure AI Services

Chapter 4: Computer Vision

- Images and image processing
- Machine learning for computer vision
- Azure AI Vision
- Exercise - Analyze images in Vision Studio

Chapter 5: Natural Language Processing

- Understand Text Analytics
- Text Analysis in Azure
- Exercise - Analyze text with Language Studio

Chapter 6: Document Intelligence and Knowledge Mining

- Introduction to Document Intelligence
- Knowledge Mining
- Explore capabilities of document intelligence
- Receipt Analysis on Azure
- Exercise - Extract from data in Document Intelligence Studio

Chapter 7: Generative AI

- What is generative AI?
- What are language models?
- Using language models
- What are copilots?
- Considerations for Copilot prompts
- Extending and developing copilots
- Exercise - Explore Microsoft Copilot

Chapter 8: Generative AI in Azure

- Generative AI - Capabilities within AI in Azure
- Azure Implementation of Gen AI
- Processing Images, Codes and more

Chapter 9: AI 900 Exam Guidance

- Describe Artificial Intelligence workloads and considerations
- Describe fundamental principles of machine learning on Azure
- Describe features of computer vision workloads on Azure
- Describe features of Natural Language Processing (NLP) workloads on Azure
- Describe features of generative AI workloads on Azure

Chapter 10: Azure AI with Data Engineering - 1

- Implementing AI in Cloud
- Co-Pilot Concepts in Big Data
- AI with Fabric

Chapter 11: Azure AI with Data Engineering - 2

- AI with Fabric SQL Pool (DWH)
- Automated Query Tuning Concepts (DWH)
- AI Search Service

Chapter 13: Azure AI with Fabric Data Engineering - 3

- AI with Azure Databricks
- Notebook Implementations with AI
- Automated Caching & AI
- AI based Debug Options
- AI based Optimizations with ETL
- AI based Optimizations with DWH

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🔥 **For more details, free demo**: Reach us on Call/WhatsApp @ +91 9666 64 0801 / +91 9666 44 0801
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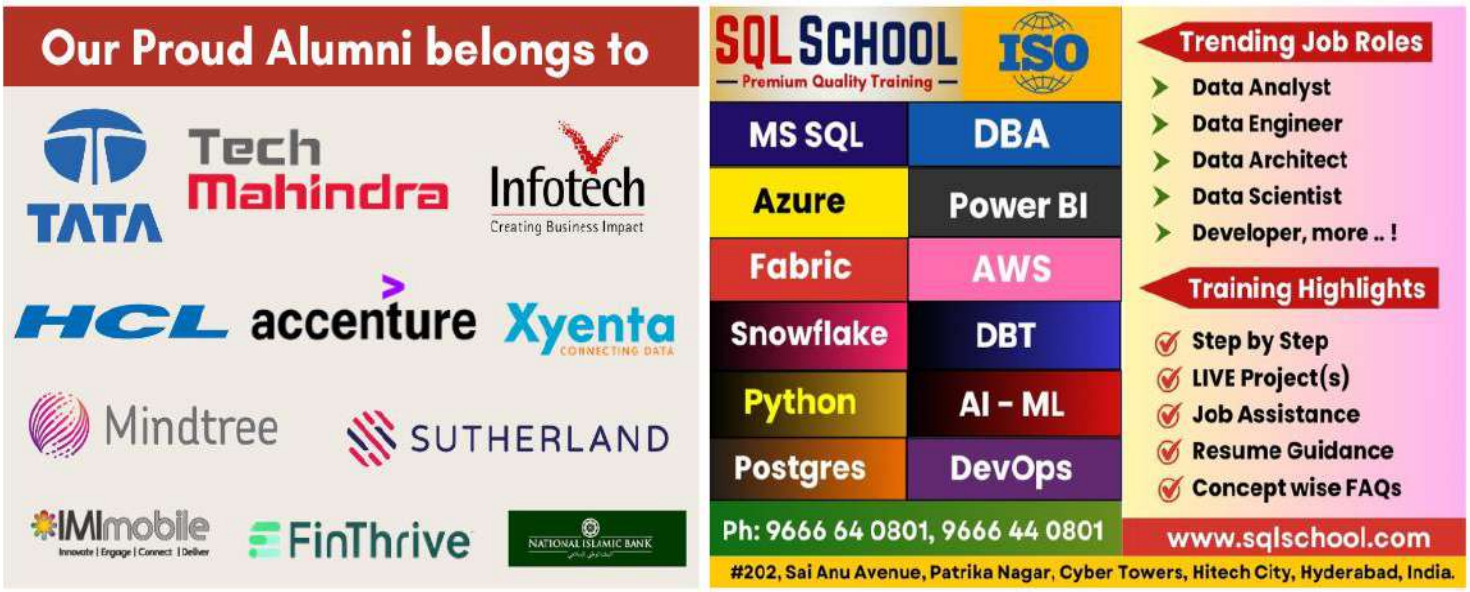
🔥 **Location**: https://maps.app.goo.gl/ZVfPGpVy7n8jGmcR9



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👉🏻 **Youtube Channel**: www.youtube.com/sequelschool

---------- ***All the best!*** ----------