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Complete Practical, Real-time Job Oriented Training

Azure Data Engineering

Thank you for contacting our **SQL School**. I am **Mr. Sai Phanindra**, trainer for this **Azure Data Engineer with Power BI** 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/

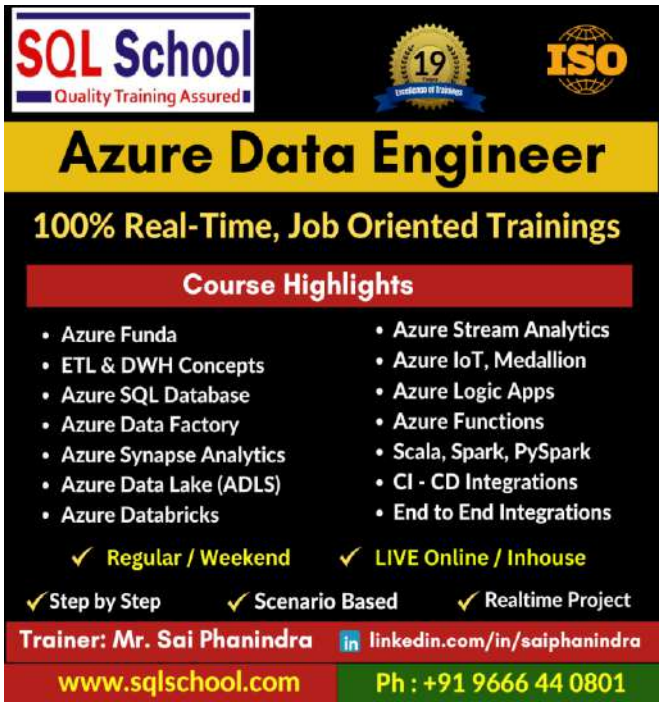
Azure Data Engineer Training:

- **Module 1: MSSQL & TSQL**
  3 Weeks; 1 Realtime Case Study
- **Module 2: Azure Data Engineer**
  7 Weeks; 1 Realtime Project
- **Module 3: Power BI with AI**
  4 Weeks; 1 Realtime Project

Trainer: linkedin.com/in/saiphanindra/

This course is very helpful for:

1. Data Engineers
2. Developers
3. Analytics
4. Architects



Azure Data Engineering - Training Options (Plans)

	Inclusions	Duration	Number of LIVE Projects
Plan A	**Module 1: Azure Data Engineer**	**7 Weeks**	**One**
Plan B	**Module 1: MSSQL, TSQL Queries** **Module 2: Azure Data Engineer**	**10 Weeks**	**One**
Plan C	**Module 1: MSSQL, TSQL Queries** **Module 2: Azure Data Engineer** **Module 3: Power BI with AI**	**14 Weeks**	**Two**

Module 1: MSSQL & TSQL

In this module, we start with detailed step by Step Database Fundamentals, SQL Concepts, TSQL Queries with simple but very useful job-oriented scenarios. We learn RDBMS, Normal Forms, Stored Procedures, Functions, Triggers, Transactions, Merge, Group By, Window (Rank), CTEs, Query Tuning, more .. with three **Realtime Case Studies** in Health Care Domain.

These concepts will be surely sufficient to proceed for our next module: Azure Data Engineering.

Module 2: Azure Data Engineer

In this module, we practically learn & implement ETL, ELT, DWH, ADF, Databricks, Data Lake, Python ETL, PySpark, Scala, Stream Analytics, IoT, Log Apps, Azure Functions, Azure Big Data, Azure Functions 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

Module 3: Power BI with AI, CoPilot

Basic to Advanced **Power BI** training with step by step examples including:

1. **6 Design Tools**
2. **Three Technologies (Power Query, DAX, CoPilot)**
3. **450+ Action Items**
4. **Two Hosting Platforms (Cloud, Report Server)**
5. **One Realtime Project**

This module includes one **Realtime Project** for your resume in **ECommerce** Domain.

Detailed Course Content

Module 1: SQL Server TSQL (MSSQL)

Applicable for Plans B & C

Ch 1: Introduction ✓ Database Introduction ✓ Types of Databases ✓ Need for & ETL, DWH ✓ BI Implementations ✓ SQL Server Advantages ✓ Version, Editions of MSSQL ✓ Engineering, Analytics Roles	**Ch 2: Installations** ✓ SQL Server 2019, 2017 ✓ SSMS Tools Installation ✓ Database Engine (OLTP) ✓ SCM, Configuration Tools ✓ Instance Types, Uses ✓ Authentication Modes ✓ Collation, File Stream	**Ch 3: SQL Basics - 1** ✓ Need for Databases, Tables ✓ Need for SQL Commands ✓ DDL, DML & DQL Statements ✓ Database Creation @ GUI ✓ Data Operations @ GUI ✓ Session ID, SQL Context ✓ DB, Tables, Data @ SQL
Ch 4: SQL Basics - 2 ✓ DDL Variants in MSSQL ✓ DML Variants in MSSQL ✓ INSERT & INSERT INTO ✓ SELECT & SELECT INTO ✓ Basic Operators in SQL ✓ Special Operators in MSSQL ✓ ALTER, ADD, TRUNCATE, DROP	**Ch 5: Data Imports, Schemas** ✓ Data Imports with Excel ✓ ORDER BY & UNION ✓ UNION ALL for Sorting Data ✓ Creating, Using Schemas ✓ Real-world Banking Database ✓ Table Migrations @ Schemas ✓ 2 Part, 3 Part & 4 Part Naming	**Ch 6: Constraints, Index Basics** ✓ Need for Constraints, Keys ✓ NULL, NOT NULL, UNIQUE ✓ Primary Key & Foreign Key ✓ RDBMS and ER Models ✓ Identity Property, Default ✓ Clustered Index, Primary Key ✓ Non-Clustered Index, Unique
Ch 7: Joins & Views Basics ✓ JOINS: Purpose. Inner Joins ✓ Left / Right / Full Outer Joins ✓ Cross Joins, Query Tuning ✓ Creating & Using Views ✓ DML, SELECT with Views ✓ RLS: WITH CHECK OPTION ✓ System Views & Metadata	**Ch 8: Functions (UDF), Data Types** ✓ Using Functions in MSSQL ✓ Scalar Value Functions ✓ Inline & Multiline Functions ✓ Date & Time Functions ✓ String, Aggregate Functions ✓ Data Types: Integer, Char, Bit ✓ SQL Variant, Timestamp, Date	**Ch 9: Stored Procedures, Models** ✓ Stored Procedures & Usage ✓ Creating, Testing Procedures ✓ Encryption, Deferred Names ✓ SPs for Validations, Analysis ✓ System SPs, Recompilation ✓ Normal Forms & Types ✓ Data Models, Self-References
Ch 10: Triggers, Temp Tables ✓ Need for Triggers ✓ DDL & DML Triggers ✓ Using Memory Tables ✓ Data Replication, Automation ✓ Local & Global Temp Tables ✓ Testing & Using Temp Tables ✓ SELECT ... INTO & Bulk Loads	**Ch 11: DB Architecture, Locks** ✓ Planning VLDBs: Files, Sizing ✓ Filegroups, Extents & Types ✓ Log Files: VLF, Mini LSN ✓ Table Location, Performance ✓ Schemas, Transfer, Synonyms ✓ Transactions Types, Lock Hint ✓ Query Blocking Scenarios	**Ch 12: Cursors & CTEs, Links** ✓ Cursors: Realtime Use ✓ Fetch & Access Cursor Rows ✓ CTEs for SELECT, DML ✓ CTEs: Scenarios & Tuning ✓ Linked Servers, Remote Joins ✓ Linked Servers: MSDTC, RPC ✓ Tuning Remote Queries
Ch 13: Merge, Upsert & Rank ✓ Need for Merge in ETL ✓ Incremental Loads with SQL	**Ch 14: Grouping & Cube** ✓ Group By & HAVING ✓ Cube, Rollup & Grouping	**Ch 15: Self Joins, Excel Analysis** ✓ Self Joins & Self References ✓ UNION, UNION ALL

✓ MERGE and RANK Functions ✓ Window Functions, Partition ✓ Identify, Remove Duplicates	✓ Joins with Group By ✓ 3 Table, 4 Table Joins ✓ Query Execution Order	✓ Sub Queries with Joins ✓ IIF, CASE, EXISTS Statements ✓ Excel Analytics, Pivot Reports
Realtime Case Study: Health-Care Domain		

Module 2: Azure Data Engineer

Applicable for all plans

Ch 1: ETL, DWH Introduction ✓ Database Introduction ✓ Data Warehouse (DWH) ✓ Data Engineering Work Flow ✓ Cloud Concepts: IaaS, PaaS ✓ SaaS & Azure Cloud Concepts ✓ Azure Resources & Groups ✓ Storage, ETL, IoT Resources	**Ch 2: Azure Intro, Azure SQL** ✓ Azure SQL Server, SQL DB ✓ Azure SQL Database (OLTP) ✓ Azure SQL Pool (DWH) ✓ Connections from SSMS Tool ✓ Connections from ADS Tool ✓ Pause / Resume SQL Pool ✓ Source Data Configurations	**Ch 3: Azure Synapse (DWH)** ✓ Synapse Pool Architecture ✓ Control Node, Compute Node ✓ DMS & Partitioned Tables ✓ Creating Tables with TSQL ✓ Distributions: RR, Hash, Repl ✓ Big Data Loads with TQL ✓ Important DMFs & DMVs
Ch 4: Azure Data Factory (ADF) ✓ Need for ADF & Pipelines ✓ Linked Services & IRs ✓ Datasets, Pipelines, Triggers ✓ Copy Data Activity & CDT ✓ Data Loads Pipelines, DTUs ✓ Pipeline Monitoring, Edits	**Ch 5: ADF Incremental Loads - 1** ✓ File Incremental Loads ✓ Storage Account, Data Lake ✓ Binary Copy, Schema Drift ✓ Staging Concept in ADF ✓ DOCP, Logging & Consistency ✓ Polybase Concept & Tuning	**Ch 6: ADF Incremental Loads - 2** ✓ Implement SCD with ADF ✓ Self-Hosted IR: Realtime Use ✓ On-premise Data: Incr Loads ✓ Copy Method: Upsert, Keys ✓ Staging & ADF Optimizations ✓ Pipeline Runs, Activity IDs
Ch 7: ADF Data Flow - 1 ✓ Data Flow Transformations ✓ Spark Clusters for Debugging ✓ Optimized Clusters, Preview ✓ Conditional Split, SELECT ✓ Sort, Union Transformations ✓ Pipelines with Data Flow	**Ch 8: ADF Data Flow - 2** ✓ Working with Multiple Tables ✓ Join Transform, Broadcast ✓ Row Filters, Column Filters ✓ Surrogate Keys, Derived Cols ✓ ETL Loads Dates, Sink Options ✓ Aggregated Data Loads	**Ch 9: ADF Data Flow - 3** ✓ Pivot Transformation ✓ Group By & Pivot Keys ✓ Column Pattern, Deduplicate ✓ Lookup, Cached Lookup ✓ Tuning Transformations ✓ Tuning Data Flow, Spark
Ch 10: Synapse Analytics - 1 ✓ Azure Synapse Analytics ✓ Dedicated SQL Pools ✓ TSQL: Stored Procedures ✓ Synapse Pipelines, Tuning ✓ SP Activity in Pipelines, Jobs ✓ Comparing ADF & Synapse	**Ch 11: Synapse Analytics - 2** ✓ Serverless Pools in Synapse ✓ TSQL Scripts with Serverless ✓ ADLS Data Imports & ELT ✓ Synapse Aggregation, Analytics ✓ Synapse Optimizations ✓ Synapse Security & Logins	**Ch 12: Synapse Analytics - 3** ✓ Apache Spark Pool & Usage ✓ Synapse Analytics with Pools ✓ PySpark Staging, Aggregations ✓ Spark Queries & Python ETL ✓ Python Notebooks, Pipelines ✓ Integrating Python with DWH
Ch 13: Parameters, SCD & ETL ✓ ADF Templates in Realtime	**Ch 14: CDC @ ETL, ELT & Tuning** ✓ Using CDC in ADF	

✓ Table Incremental Loads ✓ Control Tables, Watermarks ✓ Pipeline Parameters, SPs ✓ Dynamic Data Sets, SCD	✓ Control Tables (CT): Upserts ✓ Handling Inserts, Updates ✓ SCD Type 1 & Type 2 ✓ ADF, Synapse: Limitations	
Ch 15: Azure Intro & Storage ✓ Storage, ETL, IoT Resources ✓ Azure Storage Components ✓ Azure Storage Account, HNS ✓ Azure Data Lake Storage ✓ Azure Storage Explorer Tool ✓ Storage Explorer Config ✓ Storage Account Properties	**Ch 16: Azure Storage Operations** ✓ BLOB Storage: Containers ✓ Storage Browser, Explorer ✓ File & Folder Uploads, Edits ✓ Azure Tables: Row Key ✓ Partition Key, Timestamp ✓ Use Cases of BLOB Storage ✓ Use Cases of Azure Tables	**Ch 17: Azure Storage Security** ✓ Realtime use of Keys ✓ Access Keys & Admin Access ✓ SAS Keys Generation, Ips ✓ Creating, Using Entra Users ✓ Azure AD Users, Groups ✓ IAM & RBAC with Entra Users ✓ ACLs and ADLS Security
Ch 18: Azure SQL DB Migrations ✓ On-Premise SQL DB bacpac ✓ Azure SQL Deployment ✓ Azure Storage from SSMS ✓ Azure SQL DB Migration ✓ Migration Verifications ✓ Testing Migrations in SQL	**Ch 19: Azure Stream Analytics** ✓ Azure IoT Hubs & Devices ✓ APIs with Connection Strings ✓ Azure Steam Analytic Jobs ✓ Inputs, Outputs, SAQL Query ✓ LIVE Feed: JSON, AVRO Files ✓ Watermark & LIVE Stats	**Ch 20: Azure Stream Analytics** ✓ Azure IoT Hubs & Devices ✓ APIs with Connection Strings ✓ Azure Steam Analytic Jobs ✓ Inputs, Outputs, SAQL Query ✓ LIVE Feed: JSON, AVRO Files ✓ Watermark & LIVE Stats
Ch 21: Azure Key Vaults, Alerts ✓ Azure Encryptions @ REST ✓ Azure Key Vaults & Keys ✓ SMK & CMK Encryptions ✓ Azure Metrics: Ingress ✓ Egress, E2E Latency Issues ✓ Performance Tuning Options	**Ch 22: Azure Storage Optimization** ✓ BLOB Types & Content Types ✓ Hot, Cool, Cold, Archive Types ✓ Creating, Using Access Policies ✓ Immutable Storage, Rotation ✓ Containerization, Indexing ✓ Replication: LRS, ZRS, RA-GRS	**Ch 23: Azure Pricing, Functions** ✓ Azure Logic Apps: Usage ✓ Log Apps Usage in ETL ✓ Snapshots, Azure Functions ✓ Azure Functions Realtime Use ✓ ETL & DWH with Functions ✓ Azure Resource Pricing
Ch 24: Azure Big Data & Spark ✓ Azure Big Data & Spark ✓ Azure ETL & DWH Databases ✓ Azure Spark, HIVE Metastore ✓ Azure Databricks Service ✓ Spark Cluster (Personal) ✓ Unity Catalog & Azure VM	**Ch 25: Spark Cluster Operations** ✓ DBFS: Flat File Imports ✓ Table Conversions using GUI ✓ Spark Clusters: Table Creations ✓ Basic Transformations in Spark ✓ SQL Notebooks: Creation ✓ Default DB Queries, Cloning	**Ch 26: Python & PySpark, ETL** ✓ Python Fundamentals ✓ Python Data frames: ETL ✓ Python for Big Data, Pandas ✓ Python Notebooks, Views ✓ Aggregated Loads to Spark ✓ Spark DB Creations, Tables

Ch 27: PySpark & ADLS, Widgets ✓ Creating Spark Databases ✓ Spark Tables, Catalog Info ✓ PySpark with ADLS Storage ✓ Using Widgets for ADLS Keys ✓ PySpark Variables & Widgets ✓ Using Variables in Functions ✓ Spark SQL with Control Text ✓ Using Variables in Spark SQL	**Ch 28: ADB Jobs, Delta Tables** ✓ Azure Databrick Jobs ✓ Azure Workflows & Tasks ✓ Notebook Schedule Options ✓ Continuous Jobs, Notifications ✓ Delta Tables & Data Cleansing ✓ SCD (Merge Into), Contact, etc. ✓ Creating, Using Data frames ✓ Multi Data frame Joins	**Ch 29: Scala Notebooks & ETL** ✓ Scala Notebooks: Purpose ✓ Aggregated Data Loads ✓ Incremental Data Loads ✓ Widgets & Jobs with Scala ✓ Python Versus Scala ✓ Converting Python to Scala ✓ JVM Benefits, SQL DB Conn” ✓ SQL DB Loads with Scala
Ch 30: Databricks Architecture ✓ Azure Databricks Services ✓ Cluster Components & DBFS ✓ RDD, DAG, Photon, Spotlight ✓ Spark Partitioned Tables ✓ Cluster Manager: Spark Jobs ✓ Databricks Runtime (DBR) ✓ Databricks Security ✓ Workspace Security ✓ Notebook & Job Security	**Ch 31: Medallion Architecture** ✓ Medallion Architecture in ETL ✓ DWH Data Loads & Incr Loads ✓ Bronze, Silver & Gold Data ✓ Processing Raw Data Files ✓ Data Cleansing, Formatting ✓ Aggregation Advantages ✓ DBES & Node Architecture ✓ Unity Catalog Concept ✓ LUNs and Unity Catalog	**Ch 32: Delta LIVE Tables (DLT)** ✓ Creating Delta LIVE Tables ✓ DLT Pipelines in ETL, DWH ✓ Automated Incr Loads ✓ Control Tables, Timestamp ✓ SCD Type 1 with DLT ✓ SCD Type 2 with DLT ✓ Automated Merge Into Stmt ✓ Delta Tables Vs DLT ✓ Merge Into Vs DLT Pipeline
Real-time Project (Azure Data Engineer) + Resume Guidance + DevOps Integration		

Module 3: Power BI with AI, Co Pilot

Applicable for Plan C

Ch 1: Power BI Introduction ✓ Reporting Basics & Types ✓ Interactive, Analytical Reports ✓ Paginated Reports (RDL) ✓ Power BI Eco System ✓ Power BI Tools, Service, Server ✓ Need for Power Query (M) ✓ Need for DAX & Cloud	**Ch 2: Power BI Basic Reports** ✓ Power BI Desktop Installation ✓ Basic Report Design (PBIX) ✓ Data View, Data Models ✓ Data Points, Aggregations ✓ Focus Mode, Spotlight, Exports ✓ ToolTip, PBIX and PBIT ✓ Visual Interactions & Edits	**Ch 3: Grouping, Hierarchies** ✓ Creating Groups in Power BI ✓ Groups: Creation & Usage ✓ Group Edits Options ✓ Bins & Bin Size, Bin Count ✓ Hierarchies: Creation, Use ✓ Drill Down, Drill Up ✓ Conditional Drill Down
Ch 4: Visual Sync, Filters ✓ Slicer & Single Select ✓ Multi Select Options ✓ Integer, Character Slicers ✓ Visual Sync with Slicers ✓ Filters: Visual, Page, Report	**Ch 5: Bookmarks, Big Data Access** ✓ Bookmarks Creation & Usage ✓ Visual Interactions, Bookmarks ✓ Images: Actions, Bookmarks ✓ Big Data Access with Power BI ✓ Storage Modes: Direct Query	**Ch 6: Power BI Visualizations** ✓ Chart and Bar Visuals ✓ Line and Area Charts ✓ Maps, Tree Maps, Heatmaps ✓ Funnel, Card, Multirow Card ✓ Pie Charts & Settings

✓ Drill Thru Filters & Usage ✓ Basic, Top & Advanced ✓ Clear Filter Options, Resets	✓ Import & Performance Impact ✓ Formatting & Data Refresh ✓ Summary & Date Time Formats	✓ Waterfall, Sentiment Colors ✓ Scatter Chart, Play Axis ✓ Infographics, Classifications
Ch 7: Power Query Level 1 ✓ Power Query (Mashup) ✓ ETL Transformations in PBI ✓ Power Query Expressions ✓ Table Combine Options ✓ Merge, Union All Options ✓ Table Transformations	**Ch 8: Power Query Level 2** ✓ Any Column Transformations ✓ String / Text Transformations ✓ Numeric Analytics & Mashup ✓ Date Time Transformations ✓ Add Column Transformations ✓ Expressions and New Columns	**Ch 9: Power Query Level 3** ✓ Parameters in Power Query ✓ Static Parameters, Defaults ✓ Dynamic Dropdowns, Lists ✓ Linking with Table Queries ✓ Column from Examples ✓ Step Edits, Type Conversions
Ch 10: Power BI Cloud - 1 ✓ Power BI Cloud Concepts ✓ Workspace Creation, Usage ✓ Report Publish & Edits ✓ Semantic Models in Realtime ✓ Dashboard Creation, Usage ✓ Clone, Share, Subscribe ✓ Q&A, Lineage, Settings	**Ch 11: Power BI Cloud - 2** ✓ Data Gateways, Data Refresh ✓ Data Source Configurations ✓ Data Refresh & Scheduling ✓ Gateway Optimizations ✓ Semantic Model Optimizations ✓ Report Optimizations ✓ Dashboard Optimizations	**Ch 12: Power BI Cloud - 3** ✓ Power BI Apps, Shares ✓ App Sections & Options ✓ App Updates, Security ✓ Excel Analytics ✓ Data Explorer Options ✓ Sharing, Subscriptions ✓ Alerts, Metrics, Insights
Ch 13: Report Server & DAX ✓ Power BI Report Server ✓ Report Database, TempDB ✓ Web Service & Server URL ✓ Paginated Reports (RDL) ✓ Report Builder Tool Usage ✓ DAX: Purpose, Realtime Use	**Ch 14: DAX Level 2** ✓ DAX Measures Creation, Use ✓ DAX Functions: IIF, ISBLANK ✓ SUM, CALCULATE Functions ✓ DAX Cheat Sheet: Examples ✓ Quick Measures in Power BI ✓ Running Totals, Filters	**Ch 15: DAX Level 3** ✓ Star Rating Calculations ✓ Data Models & DAX ✓ Star & Snowflake Schemas ✓ Dimensions, Fact Tables ✓ DAX Expressions & Joins ✓ DAX Variables, Usage
Ch 16: DAX Level 4 ✓ Dynamic Report with DAX ✓ SELECTED MEMEBER ✓ Time Intelligence with DAX ✓ PARALLELPERIOD, DATE ✓ DAX with Big Data ✓ Big Data Analytics	**Ch 17: AI Fundamentals & Data** ✓ AI Fundamentals ✓ AI Implementation Concepts ✓ AI Nomenclature in Cloud ✓ AI with Azure ✓ AI with Power BI ✓ AI with Databases	**Ch 18: Microsoft CoPilot (AI)** ✓ Implementing AI in Cloud ✓ Co-Pilot Concepts in Bigdata ✓ AI with Power BI Desktop ✓ AI with Power BI Cloud ✓ AI with Power BI DAX ✓ Big Data Analytics with AI

This course also includes:

- ✓ Realtime Project
- ✓ Certification Guidance
- ✓ Mock Interviews
- ✓ Resume Guidance

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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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