

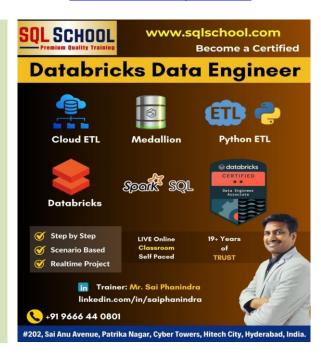
Complete Practical, Real-time Job Oriented Training

Databricks 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/

Databricks Data Engineer Training:

- Module 1: MSSQL & TSQL 3 Weeks; 1 Realtime Project
- Module 2: Python Analytics 4 Weeks; 1 Realtime Project
- Module 3: Databricks3 Weeks; 1 Realtime Project
- = 100% Practical
- Scenario Based
- 1:1 Mentorship
- Real-time Projects



Databricks Engineering Training Plans:

	Training Module	Applicable for	Duration
Plan A	1. Databricks Data Engineering	Data Engineers	3 Weeks
Plan B	 MSSQL, TSQL Queries Databricks Data Engineering 	Data Analysts, Data Engineers, Developers	4.5 Weeks
Plan C	 MSSQL, TSQL Queries Python (ETL, Analytics) Databricks Data Engineering 	Database Developers, Azure SQL Developers	7 Weeks

Detailed Course Content

Module 1: SQL Server TSQL (MSSQL) Queries

Ch 1: Database Intro & Job Roles ✓ Database Introduction ✓ Database Types: OLTP, DWH ✓ DBMS & Realtime Use ✓ DBMS Software & Purpose ✓ SQL: Purpose & Use ✓ SQL Server Versions, Editions ✓ Microsoft SQL Job Roles	Ch 2: SQL Server Installations ✓ SQL Server 2022 Installations ✓ SQL Server 2019 Installations ✓ SSMS Tool Installation ✓ Server Connections, Properties ✓ Instance & Instance Types ✓ Authentication Types ✓ System Databases & Purpose	Ch 3: SQL Basics V1 (Commands) Database, Tables & Columns SQL Basics: Purpose DDL Statements DML Statements DQL Statements Verifications @ GUI Basic SELECT Queries
Ch 4: SQL Basics V2 (Operators) DDL Variants in MSSQL DML Variants in MSSQL INSERT & INSERT INTO SELECT & SELECT INTO Basic Operators in SQL Special Operators in MSSQL ALTER, TRUNCATE, DROP Ch 7: Constraints & Keys Basics Need for Constraints, Keys Null, Not Null Constraints Unique Key Constraint Primary Key Constraint Foreign Key & References Default Constraint & Usage DB Diagrams & ER Models	Ch 5: Excel Data Imports Data Imports with Excel SQL Native Client Order By: Asc, Desc Order By with WHERE TOP & OFFSET UNION ALL UNION, Data Appends Ch 8: Indexes Basics, Tuning Indexes & Tuning Clustered Index, Primary Key Non Clustered Index & Unique Creating Indexes Manually Verifying Indexes Composite Keys, Query Optimizer Composite Indexes & Usage	Ch 6: Schemas & Security Schemas: Creation, Usage Schemas & Table Grouping Using Default Schema Real-world Banking Database Table Migrations @ Schemas 2 Part, 3 Part & 4 Part Naming Verifying Schemas in UI Ch 9: Joins & Audits Joins: Table Comaparisons Inner Joins & Matching Data Outer Joins: LEFT, RIGHT Full Outer Joins & Audits Cross Join & Table Combination Joining more than 2 tables
Ch 10: Views & RLS ✓ Views: Realtime Usage ✓ Storing SELECT in Views ✓ DML, SELECT with Views ✓ RLS: Row Level Security ✓ WITH CHECK OPTION ✓ Database Audits & Metadata ✓ Important System Views	Ch 11: Stored Procedures ✓ Stored Procedures: Realtime Use ✓ Parameters Concept with SPs ✓ Procedures with SELECT ✓ System Stored Procedures ✓ Metadata Access with SPs ✓ SP Recompilations ✓ Stored Procedures, Tuning	✓ Joining Tables with Aliases Ch 12: User Defined Functions ✓ Using Functions in MSSQL ✓ Scalar Value Functions ✓ Inline & Multiline Functions ✓ Parameterized Queries ✓ Date & Time Functions ✓ String Functions & Queries ✓ Aggregated Functions & Usage

Ch 14: Transactions & ACID	Ch 15: Cursors & Fetch
•	✓ Cursors: Realtime Usage
	✓ Cursor Declaration Types
•	✓ Open Cursor, Close Cursor
✓ COMMIT, ROLLBACK	✓ Local & Global Cursors
✓ Checkpoint & Logging	✓ Scroll & Forward Only Cursors
✓ Lock Hints & Query Blocking	✓ Static & Dynamic Cursors
✓ READPAST, LOCKHINT	✓ Fetch, Absolute Cursors
Ch 17: Relations, Normal Forms	Ch 18: Self Joins, EXISTS
✓ Adding PK to Tables	✓ Joining same table
_	✓ Correlated Queries
	✓ Joining Tables, Queries
5 ,	✓ Self Joins with WHERE
• •	✓ Self Joins with UNION
_	✓ Self Joins with Order By
✓ 3 NF, BCNF and 4 NF	✓ Self Joins with Views
Ch 20: Sub Queries	Ch21: Group By Queries
✓ Sub Queries Concept	✓ Group By, Distinct Keywords
✓ Sub Queries & Aggregations	✓ GROUP BY, HAVING
✓ Joins with Sub Queries	✓ Cube() and Rollup()
✓ Sub Queries with Aliases	✓ Sub Totals & Grand Totals
✓ Sub Queries with Order By	✓ Grouping() & Usage
✓ Sub Queries with WHERE	✓ Group By with UNION
✓ Sub Queries, Joins, Where	✓ Group By with UNION ALL
Ch 23: Data Types & Conversions	Ch 24: Window Functions, CASE
✓ Integer Data Types	✓ IIF Function and Usage
✓ Character, MAX Data Types	✓ IIF with Tables, Joins
✓ Decimal & Money Data Types	✓ CASE Statement Usage
✓ Boolean & Binary Data Types	✓ Window Functions (Rank)
✓ Date and Time Data Types	✓ Row_Number()
✓ Table, SQL_Variant Types	✓ Rank(), DenseRank()
✓ Cast() and Convert() Functions	✓ Partition By & Order By
	 ✓ Transaction Concepts in OLTP ✓ Transaction Types in Realtime ✓ Auto Commit, Explicit Transaction ✓ COMMIT, ROLLBACK ✓ Checkpoint & Logging ✓ Lock Hints & Query Blocking ✓ READPAST, LOCKHINT Ch 17: Relations, Normal Forms ✓ Adding PK to Tables ✓ Cascading Keys ✓ Self Referencing Keys ✓ Database Diagrams ✓ Normal Forms: 1 NF, 2 NF ✓ 3 NF, BCNF and 4 NF Ch 20: Sub Queries ✓ Sub Queries Concept ✓ Sub Queries & Aggregations ✓ Joins with Sub Queries ✓ Sub Queries with Order By ✓ Sub Queries with WHERE ✓ Sub Queries, Joins, Where Ch 23: Data Types & Conversions ✓ Integer Data Types ✓ Character, MAX Data Types ✓ Decimal & Money Data Types ✓ Date and Time Data Types ✓ Table, SQL_Variant Types

Mini Project (Can be used in Resume)

Module 2: Python Analytics

Ch 25: Python Introduction ✓ Need for Data Analytics ✓ Python in Data Analysis ✓ History of Python ✓ Python Versions ✓ Python Implementations ✓ Python Installations ✓ Python IDE & Usage ✓ Jupyter Notebooks	Ch 26: Python Basics, Architecture ✓ Python Scripting Options ✓ Basic Operations in Python ✓ Python Scripts, Print() ✓ Single, Multiline Statements ✓ Adding Cells, Saving Notebook ✓ Single, Multi Line Comments ✓ Python: Internal Architecture ✓ Compiler Versus Interpreter	Ch 27: Data Types & Variables ✓ Integer / Int Data Types ✓ Float & String Data Types ✓ Boolean, Binary Types ✓ Sequence Types: List, Tuple ✓ Range, Complex & memview ✓ Retrieving Data Type: type() ✓ Multi Assignments & Casting ✓ Unpack Collection, Outputs
Ch 28: Python Operators ✓ Arithmetic, Assignment Ops ✓ Comparison Operators ✓ Logical, Identity Operators ✓ Member, Bitwise Operators ✓ Operator Precedence ✓ If Else Statement, Pass ✓ Short Hand If, OR, AND ✓ ELIF and ELSE IF Statements ✓ Expressions, Ternary OPs	Ch 29: Python Loops, Iterations ✓ Python Loop & Realtime Use ✓ Python While Loop Statement ✓ Break and Continue Statement ✓ Using Print with While() ✓ Iterations & Conditions ✓ Exit Conditions & For Loops ✓ Break, Continue & Range ✓iter() andnext() ✓ iter() and Looping Options	Ch 30: Python Collections ✓ Python Collections (Arrays) ✓ list() Constructor, print() ✓ Python Tuples, Tuple Items ✓ tuple() Constructor, Usage ✓ Python Sets : Syntax Rules ✓ Duplicates, Types, Ordered ✓ Python Dictionaries: Usage ✓ Changeable, Ordered Data ✓ Dictionary Construct, type()
Ch 31: Python Functions ✓ Python Functions & Usage ✓ Function Parameters ✓ Arguments, **kwargs ✓ Default & List Parameters ✓ Python Lambda Functions ✓ Anonymous Functions ✓ Recursive Functions, Usage ✓ Return & Print @ Lamdba	Ch 32: Python Classes & Arrays ✓ Python Classes & Objects ✓init() Function ✓str() Function ✓ Self Parameters & Objects ✓ Python Inheritance & Classes ✓ Parent & Child Classes ✓init() & super() Function ✓ Polymorphism in Python	Ch 33: Python Modules ✓ import Python Modules ✓ Variables in Modules ✓ Built In Modules & dir ✓ datetime module in Python ✓ Date Objections Creation ✓ strftime Method & Usage ✓ imports & datetime.now() ✓ Using Python Constructors
Ch 34: Python JSON & RegEx ✓ JSON Concepts, Usage ✓ Dictionary & import json ✓ Python Objects into JSON ✓ Formatting & Ordering ✓ json.dumps, print options ✓ Python Regular Expressions ✓ RegEx Module & Functions ✓ search() & span(), Strings ✓ Using RegEx with JSON	Ch 35: Python User Inputs & TRY ✓ Try Except, Exception Handling ✓ NameError Resolution ✓ Python Finally Block, Usage ✓ Raise an exception method ✓ TypeError, Scripting in Python ✓ Python User Inputs ✓ Python Index Numbers ✓ Named Indexes, Usage ✓ input() & raw_input()	Ch 36: Python File Handling ✓ File Handling, Activities ✓ r, a, w, x modes ✓ t, b Operations ✓ Read Only Parts ✓ Loop, Write, Close Files ✓ Appending, Overwriting ✓ import os, path.exists ✓ f.open, f.write ✓ f.read, f.close

Ch 37: Data Analytics - Pandas Ch 38: Data Analytics - DataFrames Ch 39: Data Analytics - Pandas ✓ Python Modules & Pandas ✓ Indexes & Named Options ✓ Pandas - Cleaning Data ✓ Pandas Codebase & Usage ✓ Locate Row and Load Rows ✓ Replace, Transform Columns ✓ Installation of Pandas ✓ Row Index & Index Lists ✓ Data Discovery & Column Fill √ import pandas.DataFrame ✓ Load Files Into a DataFrame ✓ Identify & Remove Duplicates ✓ Checking Pandas Version √ dropna(), fillna() Functions √ pd.read csv() Function ✓ Pandas Series, arrays √ pd.options.display.max_rows ✓ Pandas - Data Correlations ✓ Labels : Creation, Use √ df.to_string() Function ✓ Good & Bad Correlation ✓ series(), print() √ tail() & null() Function ✓ Data Plotting & matlib Lib Ch 40: SQL DB & Python - 1 Ch 41: SQL & Python - 2 ✓ SQL & Databases ✓ pandas.Series with SQL DBs ✓ Azure Data Studio Tool ✓ Indexing Methods in Realtime √ sp_execute_external_script ✓ Convert series to data frame ✓ Input Data & Result Sets ✓ Output values into data.frame Ch 42: Realtime Project ✓ DDL & DML with Python ✓ pymssql package in SQL Server ✓ SQL out, SQL in ✓ pip list & Package Manager ✓ Variables & Parameters ✓ Python runtime, Py Package ✓ Versions, Package List ✓ pymssql.connect & Usage **✓ WITH RESULT SETS Options** ✓ Cursor Variables & Usage

Module 3: Databricks (ETL, DWH)

Ch 43: Databricks Intro	Ch 44: Spark Architecture	Ch 45: DBFS Operations
 ✓ Azure Introduction ✓ Azure Account & Subscription ✓ Open Source ETL : Spark ✓ Azure Databricks Resource ✓ Databricks Workspace 	 ✓ Spark Clusters: Types, Policies ✓ Driver Node: Purpose, Compute ✓ Worker Node: Purpose, Compute ✓ Cluster Manager, Executions ✓ Resilent Distributed Datasets 	 ✓ DBFS Concepts: File Store, Table ✓ DBFS File Uploads, Infer Schema ✓ Header Row Promotion ✓ Create Table using UI ✓ HIVE Metastore Catalog
✓ Creating Spark Cluster	✓ DAG: Directed Acyclic Graph	✓ Spark Database & Tables
Ch 46: Notebooks Intro	Ch 47: Unity Catalog	Ch 48: Spark SQL Notebooks
✓ ETL & ELT Process	✓ Unity Catalog & Big Data Storage	✓ Creating Spark Databases
✓ Workspace Options: Notebooks	✓ Unity Catalog Connectors	✓ Connecting to Spark Databases
✓ Notebooks: SQL, Python, Scala	✓ Catalog Explorer, HIVE Metastore	✓ Creating Spark tables
✓ When to use which Notebooks?	✓ Ubuntu VM : Azure Resource	✓ Data Inserts & DML Operations
✓ Notebook Exports, Imports	✓ Cluster Size & VM Size Options	✓ DDL Operations on Spark Table
✓ Cloning and Markdown Cells	✓ Default Spark Database, Usage	✓ SQL Notebook: Limitations

Ch 49: Python Introduction ✓ Python Introduction ✓ Python Usage in ETL, DDL, DML ✓ Dataframes : Purpose ✓ Dataframes as Spreadsheets ✓ Spark Environment for Python ✓ PySpark = Python inside Spark	Ch 50: Python Notebooks ✓ DBFS File Source & DataFrames ✓ Creating Temp View ✓ Dataframe Loads to TempView ✓ Data Filters in Temp View ✓ Data Aggregations in Temp View ✓ Creating Parquet Tables	Ch 51: Azure SQL Reads ✓ Azure SQL DB Connections ✓ Azure SQL Server & DB Names ✓ Connection String & URL Format ✓ Dataframes @ spark.read.jdbc() ✓ Aggregated / Incremental Tfns ✓ Data Loads into Spark Database
Ch 51: Azure SQL Writes ✓ DBFS FileStore into Dataframes ✓ SQL Database Connections ✓ Filters, Aggregations with DBFS ✓ Azure SQL DB Connections ✓ Dataframes To write.jdbc() ✓ Dataframes to Azure SQL DB	Ch 52: Medallion Architecture ✓ Medallion Architecture: Scaling ✓ Raw Data with Medallion ✓ Transformations (ETL) ✓ Bronze Layer: Raw Data ✓ Silver Layer with Temp Views ✓ Gold Layer with Spark Tables	Ch 53: PySpark Transformations ✓ Custom DataFrames ✓ Single List, Mixed List Options ✓ Concat Function & Index Options ✓ Removing Empty Rows ✓ Replacing Null Values ✓ Merge, Joins, Join Kind
Ch 54: Delta Tables (PySpark) ✓ Delta Tables : Upsert Activity ✓ Creating Delta Tables ✓ DML Operations in Delta Tables ✓ Upsert: Incremental Loads ✓ Delta Tables in HIVE Metastore ✓ MERGE INTO Statement (Spark)	Ch 55: Python Widgets (PySpark) ✓ Widgets: Notebook Parameters ✓ dbutils.widgets.text() ✓ dbuitls.widget.get() ✓ Reading Widgets into Variables ✓ Using Variables in Notebook ✓ Aggregated Loads with Widgets	Ch 56: Workflows (PySpark) ✓ Python Notebook Schedules ✓ Adding Tasks to Jobs ✓ Job Clusters & Cluster Sizes ✓ High Performance Cluster ✓ Unlimited Clusters ✓ Job Notifications, Verifications
Ch 57: Security ✓ IAM: Creating AD Users, Groups ✓ RBAC Concepts: IAM Roles ✓ Databricks Resource Security ✓ Databricks Workspace Security ✓ Notebook Job Level Security ✓ Job Level Security, Sharing	Ch 58: Spark Data Analytics ✓ Access Tokens & API Access ✓ JDBC Connections: Server Host ✓ HTTP Path & Port: Server URL ✓ Power BI Desktop: Get Data ✓ Spark Cluster Connections ✓ Data Access & Test Connection	Ch 59: Databricks Tuning ✓ Databricks Tuning: Caching ✓ Job Clusters & Cloud Computing ✓ Photon Acceleration ✓ Spot Instance & Unity Catalog ✓ Auto Scaling & Cluster Nodes ✓ Performance Optimizations
Ch 60: Scala Notebooks - V1 ✓ Scala Notebooks: Realtime Use ✓ JVM and Scala Notebooks ✓ Creating Data Frames in Scala ✓ Creating Temp Tables in Scala ✓ Medallion Architecture ✓ Parquet Tables & Delta Tables	Ch 61: Scala Notebooks - V2 ✓ Working with Widgets in Scala ✓ Variables and Parameters ✓ Dynamic Connections ✓ Format String (F String) Options ✓ Using SQL DB Connections in Scala ✓ Python Versus Scala in Realtime?	Realtime Project For Resume

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