

Snowflake Developer with SQL, Python ETL & Snowpark

Training Modules:

Module 1: Snowflake Concepts, ETL & DWH
Module 2: Advance Snowflake Development
Module 3: Python ETL, Snowpark
Module 4: Real-Time Projects

Training Details:

- ✓ **100% Practical & Realtime**
- ✓ **Training Modes:**
  - **LIVE Online Training**
  - **Self-Paced Videos** (Detailed, step by Step, Latest Videos with Notes, Project Solution)

What You Will Be Able to Build

By the End of This Course, You Can Build

- ✓ Develop Cloud Data Warehouse: Design scalable Snowflake architectures.
- ✓ Design seamless Snowflake Data Structures for Data Ingestions, Batch Processing
- ✓ Snowpark Transformation Framework: Build tested, documented and reusable pipelines.
- ✓ Automated ELT Pipelines with SnowPipe, Streams, Tasks and incremental processing.
- ✓ Enterprise Analytics Platform: Deliver curated Snowflake data to Power BI.

What Makes This Program Different?

- ✓ End-to-End Snowflake Implementations
- ✓ Snowflake + Snowpark Integration
- ✓ Azure Cloud Data Ingestion
- ✓ Power BI For Big Data Analytics
- ✓ Incremental & Automated Data Pipelines

- ✓ Performance & Advanced SnowSQL
- ✓ Snowflake Security & RBAC
- ✓ SnowSQL & Snowpark
- ✓ SnowPro Certification & Resume

Who can join this course?

- ✓ Analysts
- ✓ Developers
- ✓ Administrators
- ✓ IT Professionals
- ✓ Students

What kind of Jobs you can apply from this Snowflake Training?

After completion of this Job Oriented Hands-On Course, you can apply for:

- ✓ Snowflake Data Engineer
- ✓ Snowflake Developer
- ✓ Snowflake ETL Developer
- ✓ DBT Developer / Analytics Engineer
- ✓ Cloud Data Engineer
- ✓ Data Warehouse Developer

DETAILED COURSE CONTENT

Module 1: Snowflake (SQL, Cloud DWH, ETL, Big Data)

Ch 1: Introduction to Snowflake

- ✓ **Database, DWH & Big Data Intro. Cloud Components**
- ✓ **ETL, ELT & Cloud Computing Basics.**
- ✓ **Snowflake Cloud Intro. DBT & Cortex AI Purpose.**
- ✓ **Snowflake End to End Workflow. Job Roles.**

Ch 2: Snowflake Concepts

- ✓ **Snowflake Account. Components & Editions**
- ✓ **SnowSight UI, Accounts and Org Concepts.**
- ✓ **Basic Snowflake Usage. Databases versus Warehouse.**
- ✓ **VPS, Snowflake Pricing & Hosting Providers**

Ch 3: Architecture, Warehouse

- ✓ **Compute Architecture. Shared Disk Architecture**
- ✓ **Database Query & Data Cycle. Virtual Warehouse**
- ✓ **Massively Parallel Processing (MPP) Architecture**
- ✓ **Query Executions, Multi-Cluster Scaling**

Ch 4: SQL Concepts

- ✓ **SQL Concepts: DDL, DML, DQL**

- ✓ Need for SQL in Snowflake
- ✓ Basic SQL (SnowSQL) Commands
- ✓ Database, Table Creations. Data Operations

Ch 5: Database Concepts (SnowSQL)

- ✓ Snowflake Database Types
- ✓ Database Properties
- ✓ Permanent, Transient Databases
- ✓ Database Architecture, Logs

Ch 6: Snowflake Schemas (SnowSQL)

- ✓ Schemas in Real-Time
- ✓ Permanent, Transient Schemas
- ✓ Schemas Creation, Usage – Context
- ✓ Database Architecture, Logs

Ch 7: Snowflake Tables

- ✓ Snowflake Table Types
- ✓ Permanent, Transient Types, CREATE TABLE AS SELECT (CTAS)
- ✓ Iceberg Tables, Dynamic Tables, Table Selection Scenarios

Ch 8: Snowflake Constraints, Settings

- ✓ Constraints, Keys
- ✓ Retention Time, Dynamic Tables
- ✓ Iceberge Tables, Dynamic Tables in Realtime

Ch 9: Time Travel, Recovery

- ✓ Time Travel. Timestamp, Offset, Query ID
- ✓ Data Recovery, TIMESTAMP. Fail Safe and UNDROP, OFFSET
- ✓ Transient Tables & Real-Time Scenarios

Ch 10: Snowflake Cloning

- ✓ Zero Copy, Schema Cloning. Snapshot, Metadata
- ✓ Storage & Metadata Layer. Transactions & Injection

Ch 11: Snowflake Views

- ✓ Snowflake Views
- ✓ Creating, Using Views. System Predefined Views
- ✓ Dynamic Management Views & Metadata Audits

Ch 12: Snowflake Procedures & Functions

- ✓ Procedures and Functions. SQL Call
- ✓ sqlText:command. Cursoring Data and Operations
- ✓ Dynamic DML with SPs, Aggregate Functions

- ✓ RETURN, RETURNS Statements

Ch 13: Security Management

- ✓ Users & Roles in Snowflake. Privileges and Groups
- ✓ Organization, Account, Users. Roles, Views, RBAC & DAC
- ✓ Masking Policies. Row Access Policy. Secure Data Sharing

Ch 14: Snowflake Transactions

- ✓ ACID Properties. Implicit, Explicit and Auto
- ✓ to_timestamp_ltz and Failed Transactions
- ✓ Transactions and SPs. Scoped & Inner Transactions

Ch 15: Snowflake Streams & Audits

- ✓ Snowflake Streams & DML Auditing. Snapshot Creation
- ✓ METADATA & Streams. Data Flow & Transient Tables
- ✓ CDC with INSERT, UPDATE, DELETE, MERGE and Stream Offsets

Ch 16: Snowflake Tasks

- ✓ Tasks, Tasks Tree: Root and DAG. CRON Syntax
- ✓ RESUME. User & Snowflake Managed. Auto Scale
- ✓ Task graphs, scheduling, Dependency Management & Monitoring

Ch 17: SnowSQL

- ✓ SnowSQL Configurations. DDL, DML & SELECT
- ✓ Variables. Batch Processing. Virtual Warehouse
- ✓ EXECUTE IMMEDIATE, FOR. Out Files
- ✓ Snowflake CLI and practical deployment workflows

Ch 18: Snowflake Partitions, Stages

- ✓ Snowflake Partitions, Views. Micro Partition with DML, CDC
- ✓ Cluster Key, Depth. Overlap. Pruning, Clustering Depth, Query Profile
- ✓ List, Range and Hash Partitions. Internal and External Stages

Ch 19: Azure External Stages

- ✓ Azure Storage Account, BLOB. SAS: Shared Access Signature
- ✓ Using SAS Key and FILE PATH. COPY INTO Command Usage
- ✓ Snowflake Patterns & RegEx. File Formats: Creation, Usage

Ch 20: Snow Pipes & Incr Loads

- ✓ SnowPipe Incremental Loads. Azure Queues & Integrations
- ✓ Azure Active Directory. External Stage, Enterprise AD
- ✓ Snow Pipes and Data Loads. Incremental Data Loads
- ✓ File Format with Reg Expr. Snowpipe Streaming & Dynamic Tables

Ch 21: Power BI with Snowflake

- ✓ Power BI: Big Data Analytics. Data Access, Views
- ✓ Datawarehouse Access, Big Data Analytics
- ✓ Import vs Direct Query, performance and secure access

Ch 22: SnowPro Certification Exam Guidance

- ✓ SnowPro Certification Overview & Exam Structure
- ✓ Certification Domains & Key Topics
- ✓ Important Snowflake Concepts for the Exam
- ✓ Practice Questions & Scenario-Based Questions
- ✓ Mock Tests & Exam Readiness Assessment
- ✓ Time Management & Question-Solving Techniques
- ✓ Revision Checklist & Last-Minute Preparation
- ✓ Guidance on Certification Registration & Exam Process

Module 2: Advanced SQL Concepts

Ch 1: Advanced Snowflake Procedures

- ✓ Snowflake with Merge
- ✓ Complex Procedures, Executions
- ✓ Return Values, Loops & Java Script

Ch 2: Snowflake Functions

- ✓ String, Window Functions
- ✓ Null Handling Functions, Decode
- ✓ Aggregate, Numeric, Array Functions

Ch 3: Handling Semi Structured Data

- ✓ JSON, ARRAY, OBJECT
- ✓ VARIANT, FLATTEN, PARSE_JSON
- ✓ TRY_PASE Options

Ch 4: Data Modeling

- ✓ Star & Snowflake Schemas
- ✓ Dimension Tables, Fact Tables
- ✓ Dimension Modelling, Optimizations

Ch 5: SCD Concepts

- ✓ SCD Type 1 Implementations
- ✓ SCD Type 2 Implementations
- ✓ Realtime Issues, Solutions

Ch 6: CDC Concepts

- ✓ Change Data Capture with Snowflake
- ✓ Version Tracking & DML Operations

- ✓ DDL History, Incremental Loads

Ch 7: Dynamic Tables

- ✓ Change Data Capture with Snowflake
- ✓ Version Tracking & DML Operations
- ✓ DDL History, Incremental Loads

Ch 8: Advanced SQL in Snowflake

- ✓ Data Management, Data Handling
- ✓ Query Optimizations, Query Handling
- ✓ Query Routines & Steam Audits
- ✓ ETL & ETL Operations, StreamLit

Ch 9: GIT Integrations

- ✓ GIT Account, Projects & Branches
- ✓ GITHUB Integrations
- ✓ Change Management with Snowflake

Module 3: Python ETL, Snowpark

Ch 1: Python Introduction, Installations

- ✓ Python Introduction
- ✓ Python Versions
- ✓ Anaconda Web
- ✓ Jupyter Notebooks, IDE

Ch 2: Python Concepts

- ✓ print() , display()
- ✓ Variable Declarations
- ✓ Variable Rules
- ✓ Common Value Variables

Ch 3: Python Operators

- ✓ Athematic, String Operators
- ✓ Bit, Comparison Operators
- ✓ Binary Operators
- ✓ Indexing Operators

Ch 4: Python Data Types

- ✓ Integer, Float
- ✓ String Data Types
- ✓ Type Casting
- ✓ Type Identification
- ✓ Lists, Dict, Tuples

Ch 5: Python Control Statements

- ✓ If..Else conditions
- ✓ if..elif..else, range

- ✓ **Shorthand if**
- ✓ **in & negation operators**

Ch 6: Python Loops

- ✓ **For Loop, Range**
- ✓ **While Loop**
- ✓ **Exit Conditions**
- ✓ **Break, Continue, Paas**

Ch 7: Dataframe Transformations

- ✓ **Pandas Dataframe**
- ✓ **Concat, Merge**
- ✓ **dropna(), fillna() Functions**

Ch 8: SnowPark Concepts

- ✓ **Snowpark Concepts**
- ✓ **Architecture and Benefits**
- ✓ **Connections to Snowflake**

Ch 9: Snowpark Operations

- ✓ **Snowpark Python Libraries**
- ✓ **Snowpark DataFrames**
- ✓ **DataFrame Operations**

Ch 10: Snowpark Transformations

- ✓ **Select, Filter, Sort, GroupBy**
- ✓ **Joins, Aggregations, Window Functions**
- ✓ **Handling NULL Values, Duplicates & Data Types**
- ✓ **Read, Write Snowflake Tables**

Ch 11: Snowpark Python Functions & Advanced Processing

- ✓ **Built-in Snowpark Functions and Expressions**
- ✓ **Creating Python User-Defined Functions (UDFs)**
- ✓ **User-Defined Table Functions (UDTFs)**
- ✓ **Python Stored Procedures Using Snowpark**
- ✓ **Exception Handling, Logging and Debugging**

Ch 12: Building ETL Pipelines Using Snowpark

- ✓ **Extracting and Loading Data into Snowflake**
- ✓ **Building ETL/ELT Pipelines with Snowpark Python**
- ✓ **Incremental Data Loading and CDC Concepts**
- ✓ **Automating Pipelines Using Snowflake Tasks**
- ✓ **Performance Optimization and Best Practices**

Module 4: Real-time Projects

Real-time Project – 1

Domain: E-Commerce

- ✓ **Project Planning and ETL, ELT Requirements**
- ✓ **Snowflake Deployments, Accounts & Security**
- ✓ **Data Flow Artifacts, Tasks, Automations**
- ✓ **Snowflake Datasets, Data Engineering Solutions**
- ✓ **GITHU Integrations, Azure Integrations & Power BI**
- ✓ **Resume Points. Interview FAQs and Answers**

Technologies: Snowflake | Azure | Power BI

Real-time Project - 2

- ✓ **Finance / Accounting / HealthCare Domain**
- ✓ **Defining Project and AI Requirements**
- ✓ **Project Setup, Snowflake Development Concepts**
- ✓ **Project Deployment & Monitoring**
- ✓ **ETL, ELT with Advanced Snowflake (SnowSQL)**
- ✓ **Solution Explanation. Interview FAQs and Answers**

Technologies: Snowflake | Advanced SQL | Python ETL | Snowpark

Key Features of this 100% Practical Snowflake Training Course

- **Data Ingestion from Azure/AWS**
- **Advanced SQL Concepts, SnowPark & Python ETL**
- **SQL Optimizations and Monitoring**
- **Scripting and Scheduled Data Pipelines**

Our Snowflake Developer Training is designed to take learners from core concepts to real-world, job-ready implementation.

By the end of the training, participants will be able to:

- **Design and build end-to-end Snowflake data pipelines**
- **Implement ETL/ELT and Data Warehousing solutions**
- **Explore Snowflake with PySpark capabilities**
- **Work confidently on real-time, industry-oriented projects**
- **Prepare for SnowPro Certification**
- **Strengthen their resume, project presentation, and interview skills**

BUILD REAL SKILLS. WORK ON REAL PROJECTS. BECOME JOB READY.



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