



Job Roles for Snowflake Engineers?

1. Snowflake Data Engineer
2. Snowflake Developer
3. Snowflake ETL Developer
4. DBT Developer / Analytics Engineer
5. Cloud Data Engineer
6. Data Warehouse Developer

Our Complete Snowflake Training includes below modules:

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

Module 2: Databricks with Python ETL, PySpark

Module 3: Real-Time Project (End to End)

DETAILED COURSE CONTENT

Module 1: Snowflake (Cloud ETL, DWH)

Ch 1: Introduction to Snowflake

- ✓ Database, DWH Introduction
- ✓ Cloud Data Warehouse
- ✓ Cloud DWH Implementations
- ✓ Snowflake Cloud Intro
- ✓ Snowflake: SaaS Platform

Ch 2: Snowflake Concepts

- ✓ Snowflake Account (Cloud)
- ✓ Snowflake Components
- ✓ Snowflake Editions, Credits
- ✓ Snowflake Editions
- ✓ Virtual Private Edition (VPS)
- ✓ Snowflake Pricing

Ch 3: Architecture, Warehouse

- ✓ Compute Architecture
- ✓ Shared Disk Architecture
- ✓ CPU & Memory in Clusters
- ✓ Database Query & Data Cycle
- ✓ ColumnStore, Virtual Warehouse
- ✓ Classic UI with Snowflake
- ✓ Massively Parallel Processing

Ch 4: Snowflake Databases & Tables

- ✓ Snowflake Database Types
- ✓ Snowflake Table Types
- ✓ Retention Time, Connections
- ✓ Permanent, Transient Types
- ✓ CREATE TABLE AS SELECT (CTAS)

Ch 5: Time Travel, Recovery

- ✓ Time Travel in Snowflake
- ✓ Invoking Time Travel Feature
- ✓ Timestamp, Offset, Query ID
- ✓ Data Recovery, TIMESTAMP
- ✓ Fail Safe and UNDROP, OFFSET
- ✓ Transient Tables, Real-time

Ch 6: Schemas and Session Context

- ✓ Schema Creation Usage
- ✓ Permanent, Transient Schemas
- ✓ Managed Schemas in Snowflake
- ✓ Invoking Schemas & Cloning
- ✓ Session Context & Schema
- ✓ Data Loading with GUI

Ch 7: Snowflake Cloning

- ✓ Cloning with Snowflake
- ✓ Zero Copy, Schema Cloning
- ✓ Snapshot, Metadata

- ✓ Storage & Metadata Layer
- ✓ Real-time Considerations
- ✓ Transactions & Injection

Ch 8: Procedures & Views

- ✓ Procedures and Functions
- ✓ SQL and JavaScript & CALL
- ✓ sqlText:command
- ✓ Cursoring Data and Operations
- ✓ Dynamic DML with SPs
- ✓ RETURN, RETURNS Statements

Ch 9: Security Management

- ✓ Security with Snowflake
- ✓ Users & Roles in Snowflake
- ✓ Privileges and Groups
- ✓ Organization, Account, Users
- ✓ Creating, Using Roles, Users
- ✓ System Defined Roles Usage
- ✓ Role Hierarchy in Realtime
- ✓ Views For Security
- ✓ RBAC & DAC in Real-time

Ch 10: Snowflake Transactions

- ✓ Transaction ACID Properties
- ✓ Implicit, Explicit and Auto
- ✓ Durability and Data Storage
- ✓ current transaction() Usage
- ✓ to_timestamp_ltz and Usage
- ✓ Failed Transactions with SPs
- ✓ Transactions and SPs
- ✓ Scoped & INNER Transactions

Ch 11: Snowflake Streams & Audits

- ✓ Snowflake Streams & Usage
- ✓ Streams and DML Auditing
- ✓ Snapshot Creation, Offset
- ✓ METADATA Options & Streams
- ✓ Data Flow & Snowflake Streams
- ✓ Streams on Transient Tables
- ✓ Time Travel with Stream Tables

Ch 12: Snowflake Tasks

- ✓ Tasks, Serverless Compute

- ✓ Tasks Tree: Root and DAG
- ✓ Tasks Schedules and RESUME
- ✓ User & Snowflake Managed
- ✓ CRON Syntax with Tasks
- ✓ Virtual Warehouse Concepts
- ✓ Multi Cluster Warehouse
- ✓ Auto Scale Options, Billing

Ch 13: SnowSQL and Variables

- ✓ SnowSQL Configurations
- ✓ DDL, DML & SELECT
- ✓ SnowSQL Command Line
- ✓ Variables and Batch Process
- ✓ DECLARE, LET, BEGIN & END
- ✓ EXECUTE IMMEDIATE, FOR
- ✓ Creating Virtual Warehouse
- ✓ Writing Output to Files

Ch 14: Snowflake Partitions, Stages

- ✓ Snowflake Partitions, Views
- ✓ Micro Partition with DML, CDC
- ✓ Cluster Key, Depth and Overlap
- ✓ Internal Partition Types & Usage
- ✓ List, Range and Hash Partitions
- ✓ Snowflake Stages, Types
- ✓ Internal and External Stages
- ✓ COPY Command, Bulk Loads

Ch 15: Azure / AWS External Stages

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

Ch 16: 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

Ch 17: Power BI with Snowflake

- ✓ Power BI: Big Data Analytics
- ✓ Snowflake Data Access, Views
- ✓ Datawarehouse Access, Views
- ✓ Server URL & View Access
- ✓ Data Analytics with Views

Ch 18: SnowPro Certification Exam Guidance

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

Module 2: Databricks (Spark, PySpark, Big Data, Genie AI)

Ch 1: Databricks Introduction

- ✓ Cloud ETL, DWH
- ✓ Cloud Computing
- ✓ Databricks Concepts
- ✓ Databricks Account
- ✓ Big Data in Cloud

Ch 2: Databricks Architecture

- ✓ Databricks Runtime (DBR)
- ✓ RDD & DAG
- ✓ Databricks Lakehouse Architecture
- ✓ Spark Compute Concepts
- ✓ Workers & Drivers
- ✓ Databricks Framework
- ✓ Databricks APIs

Ch 3: Unity Catalog

- ✓ Unity Catalog Concepts
- ✓ Metastore
- ✓ Catalogs & Schemas
- ✓ Managed & External Tables
- ✓ Storage Credentials
- ✓ External Locations
- ✓ Volumes

- ✓ GRANT / REVOKE
- ✓ Data Permissions
- ✓ Lineage
- ✓ Data Governance
- ✓ Databricks Workspace UI
- ✓ Spark Table Creations

Ch 4: Spark SQL: Basics

- ✓ Spark SQL Notebooks
- ✓ Creating Catalog
- ✓ Creating Schemas
- ✓ Creating Tables
- ✓ Spark Data Types
- ✓ PySpark API: SQL Queries
- ✓ Dropping Objects
- ✓ Notebooks: Exports, Clone

Ch 5: Spark SQL: Table Types

- ✓ Delta Tables
- ✓ Managed Tables
- ✓ External Tables
- ✓ Data Partitioning
- ✓ Union, Views in Spark
- ✓ External Volumes

Ch 6: Spark SQL: Functions

- ✓ Math, Sort Functions
- ✓ String, DateTime Functions
- ✓ Conditional Statements
- ✓ SQL Expressions with `expr()`
- ✓ Volume for our Data Assets
- ✓ File Formats, Schema Inference
- ✓ Spark SQL Aggregations

Ch 7: Spark SQL: Time Travel

- ✓ Time Travel Concepts
- ✓ Spark DB: Logical Architecture
- ✓ Spark DB: Physical Store
- ✓ Data File Store
- ✓ Log File Store
- ✓ Time Travel
- ✓ DESCRIBE, EXTENDED
- ✓ HISTORY, Version Numbers

Ch 8: Python: Introduction, Print

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

Ch 9: Python: Variables

- ✓ Python Variables
- ✓ Variable Declarations
- ✓ Variable Values
- ✓ Value Types
- ✓ Multi Variable Values
- ✓ Common Variable Values
- ✓ Realtime use of Variables

Ch 10: Python: Operators

- ✓ Need for Operators
- ✓ Arithmetic Operators
- ✓ Assignment Operators
- ✓ Comparison Operators
- ✓ Operator Precedence
- ✓ Operands in Python

Ch 11: Python: Control Statements

- ✓ Python Control Structures
- ✓ If ... Else Statement
- ✓ Short Hand If
- ✓ ELIF & ELSE IF Statements
- ✓ OR, AND Concepts
- ✓ Python Loops

Ch 12: Python: Data Types

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

Ch 13: Python: Modules & DataFrames

- ✓ Python Modules
- ✓ Pandas
- ✓ NumPy
- ✓ DataFrame Concepts
- ✓ Handling Nulls
- ✓ Data Cleansing Concepts
- ✓ Python Functions

Ch 14: PySpark DataFrames & Transformations

- ✓ Creating PySpark DataFrames
- ✓ Reading Data Sources
- ✓ select(), filter(), withColumn()
- ✓ Handling NULL Values
- ✓ Data Type Casting
- ✓ Joins

- ✓ union() / unionByName()
- ✓ Aggregations
- ✓ Window Functions
- ✓ Writing DataFrames
- ✓ DataFrame vs Spark SQL

Ch 15: Medallion Architecture - 1

- ✓ Medallion Architecture
- ✓ Aggregated Data Loads
- ✓ Bronze, Silver and Gold
- ✓ Temp Views
- ✓ Spark Tables (Parquet)
- ✓ Work with File Sources

Ch 16: Medallion Architecture - 2

- ✓ Medallion Architecture
- ✓ Azure SQL DB Connections
- ✓ Joining Source Tables
- ✓ Data Frames, Temp Views
- ✓ Aggregated Data Loads
- ✓ Gold Data Consumption
- ✓ Raw Sources → Bronze → Silver → Gold → BI/Analytics

Ch 17: Delta Lake

- ✓ Databricks Delta Lake
- ✓ Schema Evolution
- ✓ Azure SQL DB Connections
- ✓ DataFrames, Temp Views
- ✓ Delta Table API
- ✓ Update, Delete Records
- ✓ MERGE / Upsert Operations
- ✓ Version History & Data Retention
- ✓ Delta Transaction Log

Ch 18: PySpark: Widgets

- ✓ PySpark Parameters
- ✓ Text Widgets
- ✓ User Parameters
- ✓ Manual Executions
- ✓ Automations
- ✓ UI & JSON For Widgets

Ch 19: Lake Flow Jobs

- ✓ Workflows & CRON
- ✓ Job Compute, Running Tasks
- ✓ Python Script Tasks
- ✓ Parameters into Notebook Tasks
- ✓ Parameters into Python Script Tasks
- ✓ Concurrent Executions, Dependencies
- ✓ Branching Control with the If-Else Task

Ch 20: PySpark: Auto Loader - 1

- ✓ Auto Loader Concept
- ✓ Cloud Files Architecture
- ✓ Checkpoint Configurations
- ✓ Schema Location
- ✓ Checkpoint Location
- ✓ Initial Loads

Ch 21: PySpark: Auto Loader - 2

- ✓ Reading Streams
- ✓ Manually Cancel your Data Streams
- ✓ Writing to a Data Stream
- ✓ Schema Evaluation Modes
- ✓ Workspace Modules
- ✓ Incremental File Ingestion
- ✓ Schema Evolution
- ✓ Rescued Data Column
- ✓ Trigger Options
- ✓ Exactly-once processing concepts

Ch 22: LakeFlow Declarative Pipelines

- ✓ SDP: Spark Declarative Pipelines
- ✓ Delta LIVE Tables
- ✓ Streaming Data Loads
- ✓ Bronze, Silver, Gold Data
- ✓ Materialized Views
- ✓ Pipeline Clusters
- ✓ Databricks CLI
- ✓ Data Quality Checks

Ch 23: Databricks Optimizations

- ✓ Lazy Evaluation
- ✓ Explain Plan
- ✓ Caching
- ✓ Data Shuffling
- ✓ Broadcast Joins
- ✓ Partitions
- ✓ Data Skipping
- ✓ Liquid Clustering
- ✓ VACUUM
- ✓ OPTIMIZE, Z Ordering

Ch 24: Databricks Security, AI

- ✓ Overview of ACLs
- ✓ Adding a New User to Workspace
- ✓ Workspace Access Control
- ✓ Cluster Access Control
- ✓ Groups & Lake Bridge
- ✓ Access Keys (Tokens), Genie AI

Ch 25: GitHub Concepts

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

Ch 26: Databricks Data Engineer Certification Guidance

- ✓ Exam Q & A, Scenarios
- ✓ Certification Exam Objectives
- ✓ Topic-Wise Revision
- ✓ Scenario-Based Questions
- ✓ Practice Assessments
- ✓ Mock Exams
- ✓ Databricks Interview Questions
- ✓ Real-Time Scenario Discussions
- ✓ Resume Project Explanation
- ✓ Technical Mock Interview

Module 3: Realtime Project Retail (End to End)

Project Title

Retail Sales Analytics Platform using Databricks (Medallion Architecture)

Project Overview

Students will build a production-style data platform using Lakehouse Architecture (Bronze, Silver, and Gold), implementing modern ETL practices, data quality validation, incremental processing, orchestration, optimization, and reporting.

Business Scenario

A multinational retail company receives daily data from multiple operational systems. The company wants to build a centralized analytics platform to:

- Consolidate data from different business domains
- Improve data quality and consistency
- Track sales performance across regions
- Analyse customer purchasing behaviour
- Monitor inventory levels
- Generate business KPIs for decision-makers
- Deliver Power BI dashboards with near real-time insights

Resume Highlights

After completing this project, you can confidently showcase experience in:

- PySpark & Spark SQL
- Delta Lake
- Medallion Architecture
- ETL Pipeline Development

- Incremental Data Processing
- Data Quality & Validation
- Unity Catalog
- Workflow Automation
- Performance Optimization

Why Choose This Training?

-  Industry-Oriented Curriculum
-  End-to-End Real-Time Projects & Solutions
-  Medallion Architecture Implementation
-  100% Hands-on Practical Sessions
-  Production-Ready ETL Pipelines
-  PySpark & Spark SQL from Basics to Advanced
-  Interview Preparation
-  Assignments & Practice Labs
-  100% Practical • No Unnecessary Theory
-  Learn Like You're Working in a Real Company

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- ✓ Real-Time Project Walkthroughs
- ✓ PySpark, Spark SQL & Delta Lake
- ✓ Interview Questions & Scenarios
- ✓ Job Roles & Career Guidance

Watch a Free Class Before You Decide..

Databricks Data Engineering Free Classes:

<https://www.youtube.com/playlist?list=PLT3eLlc1sgg>

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