SNOWFLAKE SNOWPARK APPLICATION DEVELOPER

ONE-DAY COURSE

24L13

snowflake® | UNIVERSITY

DATASHEET

OVERVIEW

This one-day course covers key Snowpark features for developing applications in Snowflake and is intended for practitioners who will be building Snowpark application solutions in Snowflake. The emphasis of this course is on a variety of application developer capabilities rather than core programming skills. The course consists of lectures, demos, labs, and discussions.

ACQUIRED SKILLS

- Describe Snowflake's notebook capabilities.
- Create and work with Snowflake Notebooks.
- Create reusable code as User-defined Table Functions (UDTFs).
- Use DML to create and manage tables.
- Solve problems with Snowsight Python Worksheets.
- Record the activity of your Snowflake programs with logging.
- Develop competency in using pandas on Snowflake.
- Process unstructured data using Snowflake User-defined Functions (UDFs) and stored procedures.

WHO SHOULD ATTEND

- Data Engineers
- Data Scientists
- Data Application Developers
- Database Architects
- Database Administrators
- Data Analysts with programming experience

PREREQUISITES

- Completion of "Snowpark DataFrame Programming" or prior knowledge and experience with DataFrame programming: Creation, Transformation, Actions, PySpark, UDFs, and Stored Procedures.
- Prior knowledge and experience with Snowflake accounts, roles, virtual warehouses, databases, tables, and views.
- Previous data warehouse knowledge and experience.
- Proficiency in writing code in Python.
- Familiarity with Snowflake objects and basic SQL.

DELIVERY FORMAT

Instructor-led Public or Private classes are available.

TOPICS COVERED

Snowpark Review

- What is Snowpark?
- Snowpark Uses
- Snowpark Architecture
- Snowpark Setup

DML Using Table DataFrames

- DataFrames are Immutable
- A Table is a Mutable DataFrame
- Creating a Table
- Deleting Rows From a Table
- Updating Rows in a Table
- Merging Rows in a Table
- Understanding Views

User-defined Functions (UDFs) Recap and Developing User-defined Table Functions (UDTFs)

- Creating and Registering UDFs
- Creating and Using Python User-defined Table Functions (UDTFs)

Developing Stored Procedures

- Lambda Example
- Anonymous Python Stored Procedures: Really?
- CALL (with Anonymous Procedure)
- Using sproc(…) as a Decorator
- Authoring a Stored Procedure Using DDL

Working with Snowsight Python Worksheets

- Additional Overhead and Costs
- Steps to using Snowsight Python Worksheets
- Test Handler

Python Vectorized UDFs

- Proper Testing
- Create a Non-Vectorized UDF and Use it in a Transformation
- Test a Non-Vectorized UDF and Measure Performance
- Create a Vectorized UDF and Use it in a Transformation

Processing Unstructured Data with Snowpark

- Steps in Processing Unstructured Data
- Stages
- Directory Tables
- Access URLs
- Encryption for Internal Stages
- Processing Unstructured Data in UDFs
- Registering the UDF
- Invoking the UDF
- Unstructured Data Best Practices

Logging Messages With Snowpark

- Logging Introduction
- Log Entries vs Trace Events
- Event Tables
- Setting Log Levels
- Logging From Objects
- Emitting Trace Events
- Querying Over Log Messages

Introduction to Snowflake Notebooks

- Creating a Notebook
- Notebook Cell Basics
- Running Notebook Cells
- Editing Cells
- Import Python Packages
- Running SQL and Python Cells

Using Pandas with Snowflake Notebooks

- Snowflake Notebooks
- Introduction to Pandas on Snowflake