

Snowflake – Metadata Validation Script

This code turns Snowflake metadata into a conversational interface, allowing users to ask natural-language questions and instantly retrieve governance and catalog insights using live SQL. It helps teams understand data estates faster from table ownership and usage to schema structure without writing complex INFORMATION_SCHEMA queries manually. In real projects, this is powerful for data discovery, impact analysis, audits, onboarding new engineers, and reducing dependency on platform experts while keeping everything governed and query-backed.

The screenshot shows a code editor interface with the following details:

- EXPLORER:** Shows a project structure under "SNOWFLAKE-CHATGPT".
 - 02-database-generator
 - 03-metadata-inspector
 - 04-data-analysis-ignore
 - app1.py
 - app2.py
 - app4.py (selected)
 - secrets.toml
- TIMELINE:** Shows updates for app4.py over 1 year.
- Code Editor:** Displays a Python script named "app4.py". The code uses Streamlit and OpenAI to interact with Snowflake metadata.

```
# This script is part of a Streamlit application that allows users to inspect Snowflake metadata.
# It includes a chat interface for asking questions about Snowflake metadata and displays the results.

import re
import streamlit as st
from openai import OpenAI

def getChatResponse(prompt):
    client = OpenAI(api_key=st.secrets["OPENAI_API_KEY"])
    r = client.chat.completions.create(
        model="gpt-4-1106-preview",
        messages=[{"role": m["role"], "content": m["content"]} for m in st.session_state.messages])
    return r.choices[0].message.content

def runQuery(sql):
    conn = st.connection("snowflake")
    results = None
    try:
        results = conn.query(sql)
        st.dataframe(results)
    except:
        st.error("Wrong query!")
    return results

st.title("Snowflake Chat Metadata Inspector")

first = "messages" not in st.session_state
```
- PROBLEMS:** Shows 26 warnings, with one specific warning about Boto3 support being deprecated.

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To retrieve a list of tables that exist in the `TPCH_SF1` schema within the `SNOWFLAKE_SAMPLE_DATA` database, you would issue the following query:

```
SELECT TABLE_NAME  
FROM SNOWFLAKE_SAMPLE_DATA.INFORMATION_SCHEMA.TABLES  
WHERE TABLE_SCHEMA = 'TPCH_SF1';
```

This query will provide you with the names of all tables within the `TPCH_SF1` schema in the `SNOWFLAKE_SAMPLE_DATA` database.

TABLE_NAME
0 LINEITEM
1 NATION
2 CUSTOMER
3 REGION
4 SUPPLIER
5 PARTSUPP
6 PART
7 ORDERS

What tables exist in the `TPCH_SF1` schema? >