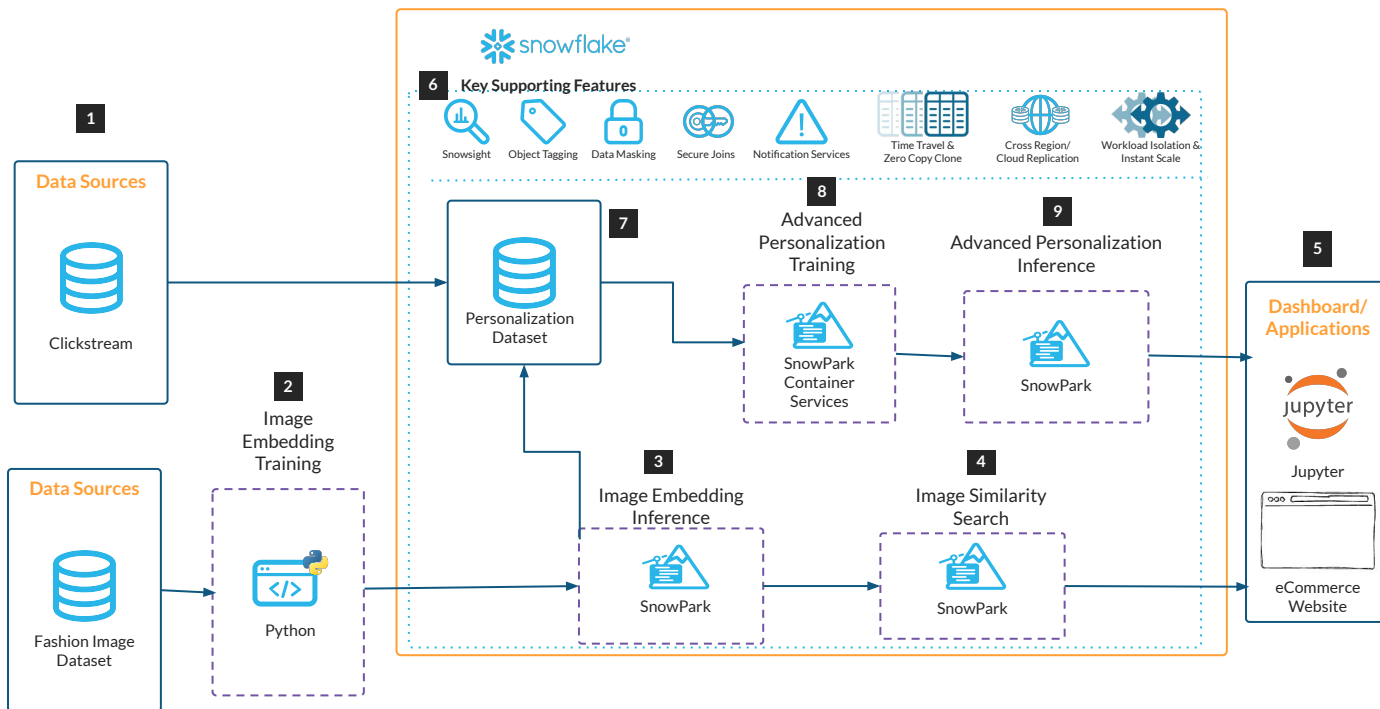


RETAIL ADVANCED PERSONALIZATION REFERENCE ARCHITECTURE (Snowflake Native)



OBJECTIVE

Personalized search acts as a catalyst in elevating brand perception, fostering customer engagement and loyalty, which, in turn, is a significant driver of revenue. An AI-powered personalization engine in the Snowflake Data Cloud aims to improve customer experience and helps retailers position themselves above competitors.

USE CASE FLOW

- 1 Images data set is store locally or in External stage
- 2 Fine Tune ResNet 18 on Fashion Image Dataset and convert it to a feature extractor for extracting image embeddings
- 3 Serve Embedding Model as a Snowflake UDF using the ONNX runtime to accelerate inference
- 4 Retrieve embeddings and Calculate pairwise cosine similarity to identify similar images to a source image
- 5 Data scientist can interact with Jupyter notebook and view application via Streamlit
- 6 Leverage key supporting functions including role based access control, masking and replication in addition to workload isolation and instant scaling.
- 7 Image Embeddings are combined with clickstream data into a final Personalization dataset
- 8 Training final Advanced personalization model using SnowPark Container Services
- 9 Serves Advanced Personalization Model as a Snowflake UDF using the ONNX runtime to accelerate inference

RELATED CONTENT

Webpage: [INCREASE PERSONALIZATION ACROSS RETAIL AND ECOMMERCE](#)