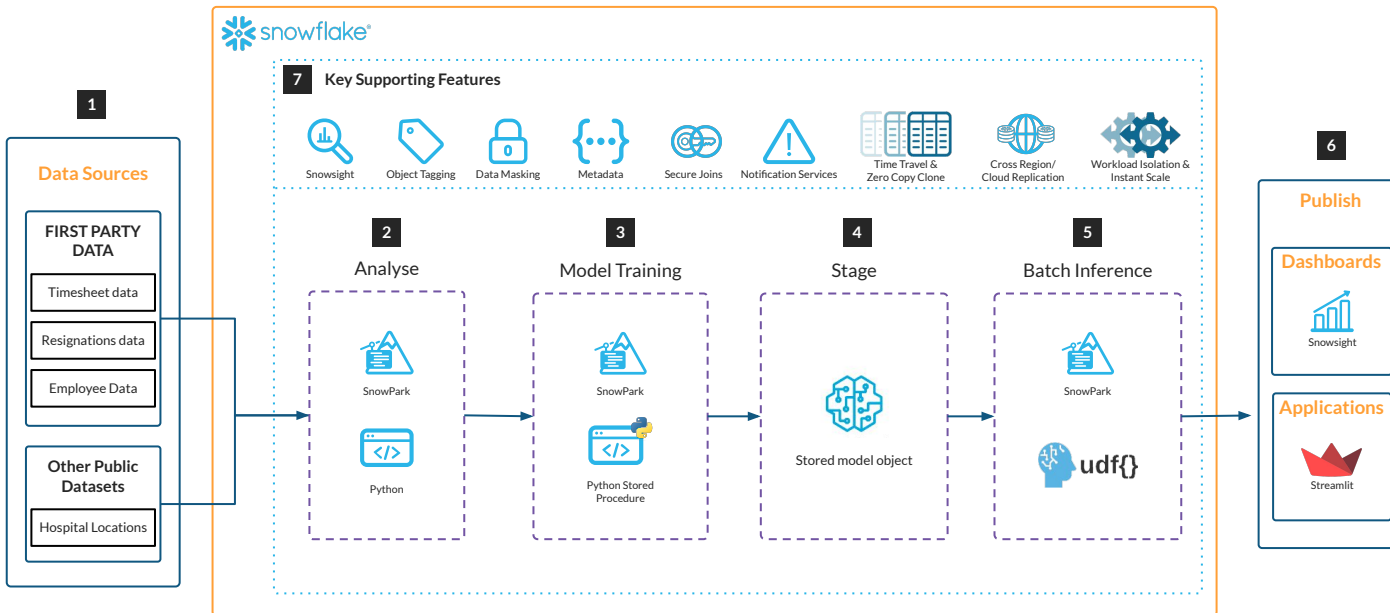


# NURSING ATTRITION REFERENCE ARCHITECTURE



## OBJECTIVE

The nursing attrition solution aims to address personnel shortages in nursing caused by a demand for registered nurses exceeding the supply of qualified candidates. Implementing this solution helps healthcare organizations avoid negative impacts associated with high RN vacancy rates, such as overburdening staff and incurring expensive costs for backfilling and hiring contract staff, leading to negative impacts on patient care and customer service.

## USE-CASE FLOW

- 1** First and third party data sources typically include people data. Data sources can be enriched with Marketplace data as desired.
- 2** Predictive analytics and exploratory data analysis is performed on Nursing Attrition data
- 3** A simple classification model is trained to predict staff churn based on relevant factors
- 4** A trained model to predict staff attrition is saved as a model object within snowflake internal stage
- 5** The trained staff attrition model object is called via a UDF in Snowpark to calculate a churn score for each employee. Feature importance analysis indicates factors correlated with churn (overtime, tenure, and commute time).
- 6** Data scientist can interact with Jupyter notebook and view application via Streamlit
- 7** Leverage key supporting functions including role based access control, masking and replication in addition to workload isolation and instant scaling.

## RELATED CONTENT

Blog - [Exploring Industry Solutions with Snowflake: HR Analytics - Nurse Attrition for Healthcare Providers](#)