



# DATA ENGINEERING WITH SNOWFLAKE

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# Your Instructor Today...



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- > What is data engineering?
  - > I-T-D framework for data pipelines
  - > Data engineering with Snowflake
  - > Hands-On Lab: Build a data pipeline with Snowflake in 30 minutes

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# WHAT IS DATA ENGINEERING?





## **Cloud Data Engineering for Dummies** Snowflake Special Edition





*....the overall effort required to create data pipelines that automate the transfer of data from place to place and transform that data into a specific format for a certain type of analysis.*

*In that sense, data engineering isn't something you do once.*

*It's an ongoing practice that involves collecting, ..., transforming, and delivering data.*

**Cloud Data Engineering for Dummies**  
Snowflake Special Edition





*transfer of data*

*data pipelines      automate  
transform that data*

*ongoing  
delivering data*

*collecting      transforming*

**Cloud Data Engineering for Dummies**  
Snowflake Special Edition



# I-T-D Framework for Data Pipelines



INGESTION



TRANSFORMATION



DELIVERY



# I-T-D Framework for Data Pipelines



INGESTION



TRANSFORMATION



DELIVERY

Loading data into  
Snowflake



# I-T-D Framework for Data Pipelines



INGESTION



TRANSFORMATION



DELIVERY

Loading data into  
Snowflake

Using SQL,  
Python, and other  
Snowflake  
primitives for  
transforming data



# I-T-D Framework for Data Pipelines



INGESTION



TRANSFORMATION



DELIVERY

**Loading data into  
Snowflake**

**Using SQL,  
Python, and other  
Snowflake  
primitives for  
transforming data**

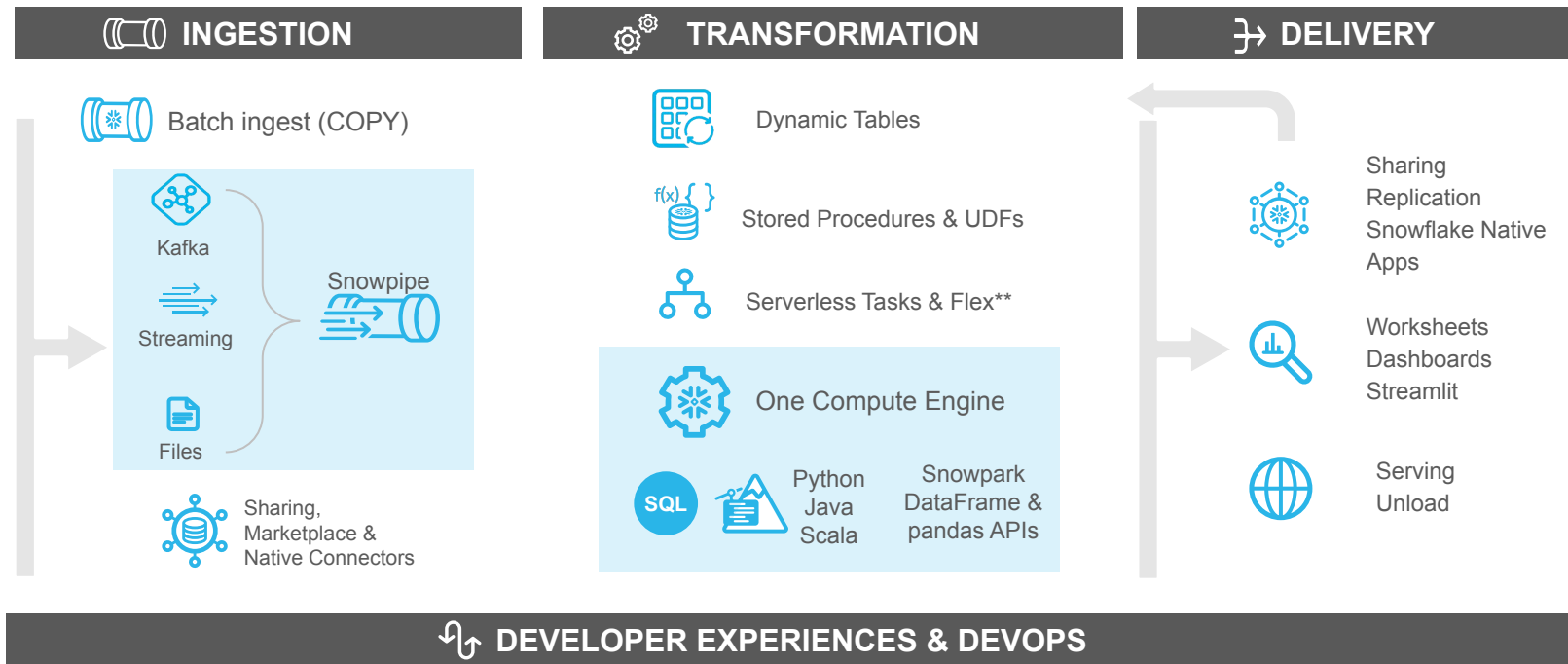
**Delivering a final  
data product in  
several different  
ways with  
Snowflake**



# Snowflake for Data Engineering



# Snowflake for Data Engineering




# Snowflake for Data Engineering: For Today's Lab

 INGESTION

 TRANSFORMATION

 DELIVERY

 Batch ingest (COPY)

 Sharing,  
Marketplace &  
Native Connectors

 UDFs



One Compute Engine

SQL



Python

Snowpark  
DataFrames



Streamlit in  
Snowflake



# HANDS-ON LAB: BUILD A DATA PIPELINE IN SNOWFLAKE IN 30 MINS



# What You'll Need

If you're interested in following along:

- Free 30-day Snowflake Trial Account: [signup.snowflake.com](https://signup.snowflake.com)
- GitHub Repo containing code:  
<https://github.com/Snowflake-Labs/snowflake-datacamp-gilberto>

# What We'll Build - Pipeline to track weather



INGESTION



TRANSFORMATION



DELIVERY



# What We'll Build - Pipeline to track weather



INGESTION



TRANSFORMATION



DELIVERY

**Weather data from  
Snowflake  
Marketplace**

**Sales data from  
AWS S3 bucket**

**SQL, with a hint of  
Python**

**Create views and  
user-defined  
functions (UDFs)**

**Build a Streamlit  
application in  
Snowflake**



# LET'S GET STARTED!



# THANK YOU



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# More Resources

- Snowflake Developer Hub: [developers.snowflake.com](https://developers.snowflake.com)
- Snowflake Labs, open source organization:  
<https://github.com/Snowflake-Labs>
- Snowflake Developers YouTube Channel:  
[https://www.youtube.com/channel/UCxgY7r-o\\_qI8ADIdyiQr3Zw](https://www.youtube.com/channel/UCxgY7r-o_qI8ADIdyiQr3Zw)



# THANK YOU



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