



SNOWFLAKE DATA CLOUD DEMO

Unite Your Siloed Data. Access a World of Data.

Meet today's presenters



David Kincaid
Senior Sales Engineer
Snowflake



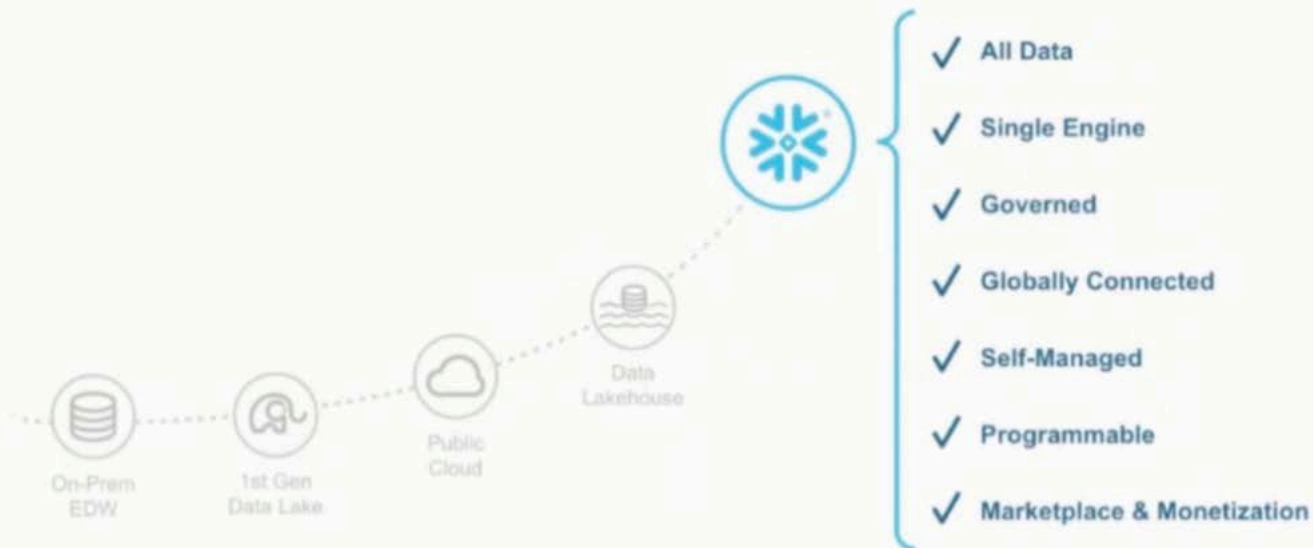
Joseph Wu
Senior Sales Engineer
Snowflake

Details

- The webinar will be shared with the participants within the next couple of days.
- If you have any questions, please use the Q&A functionality and provide adequate context.
- If you have any audio issue, refresh your browser.
- Let's get started ...



Innovation Journey to the Data Cloud



Modern Platform Requirements



Fast For Any Workload

Run virtually any number or type of job across users and data volumes quickly and reliably.



It Just Works

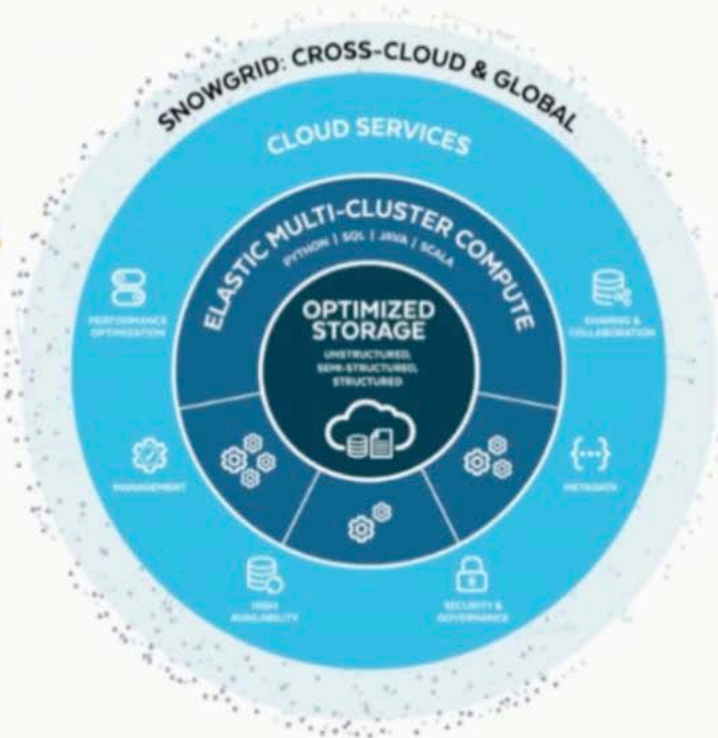
Replace manual with automated to operate at scale, optimize costs, and minimize downtime.



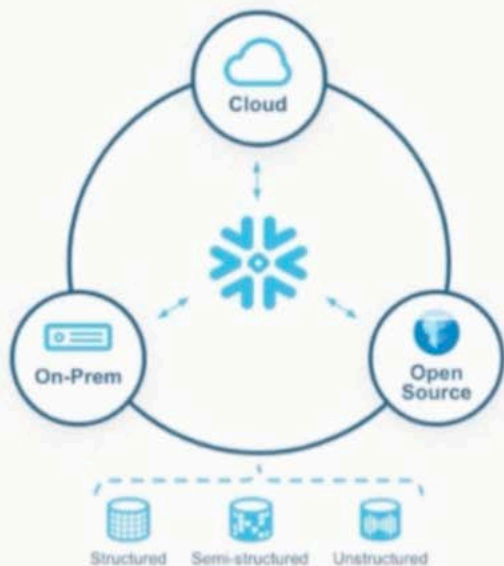
Connected to What Matters

Extend access and collaboration across teams, workloads, clouds, and data, seamlessly and securely.

SNOWFLAKE PLATFORM ARCHITECTURE



Optimized Storage



Unsiload access to your data

Unstructured, semi-structured, and structured data together with near-infinite scale.

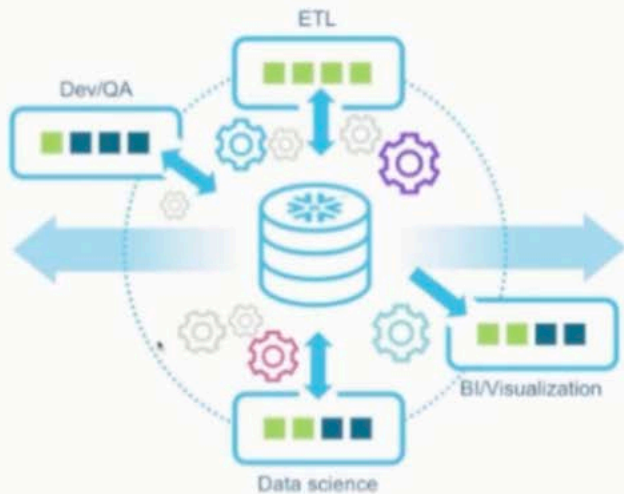
Easily manage data at scale

Fast and efficient access, optimized compression, and secure data - all automated.

Flexibility & interoperability

Work with data on-premises* or in open table formats* to remove lock-in and adapt to new data patterns.

Elastic Multi-Cluster Compute



One engine for every workload

Simplify your architecture. Power complex pipelines, analytics, data science, interactive applications, and more.

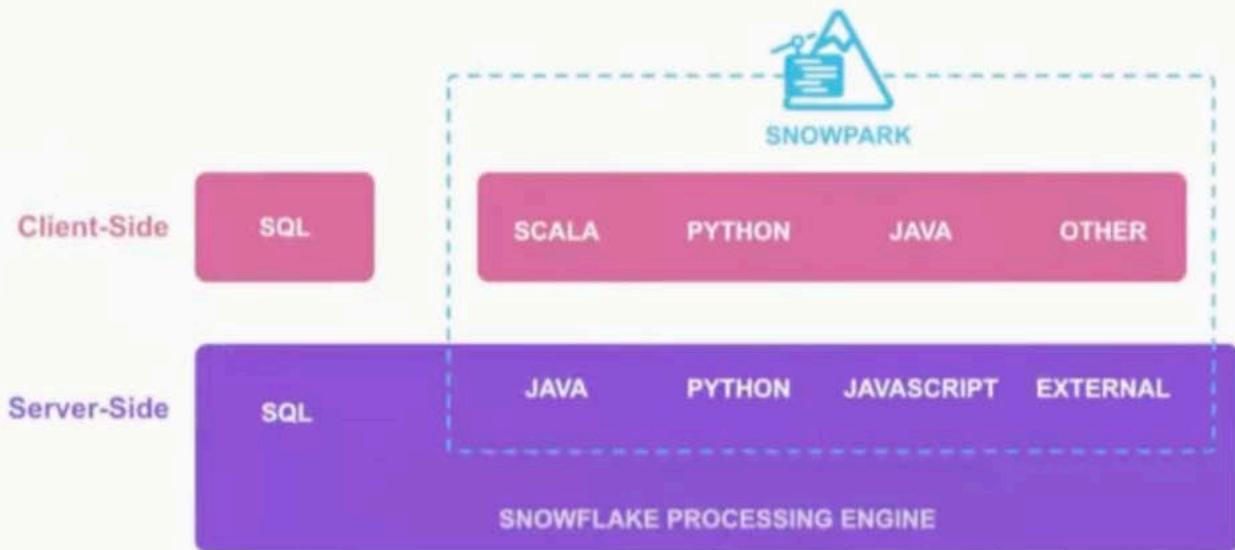
Leading performance and concurrency

Fast, reliable performance for virtually all users and jobs with no tuning or contention.

Accessible & programmable

Work in SQL, Python, or Java, and run your preferred tools and libraries directly with Snowpark - without moving data.

Code the Same Way, Execute Faster With Snowpark



Cloud Services



Snowflake Managed

Maintenance
& Tuning

Multi-Cluster
Compute
Resources

Administration

Availability

Networking
& Encryption

Query Design
& Tuning

Self-managed

Automate encryption, access controls, availability, tuning, maintenance, and more to keep operations simple and smooth.

Transparent improvements

Continually benefit from the latest performance enhancements and economics - no action required.

Optimized resources & costs

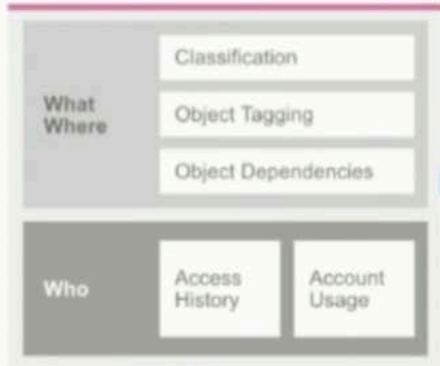
Only pay for what you used and get full visibility and cost governance controls to right-size costs.



Unified Governance



Know Your Data



Protect Your Data



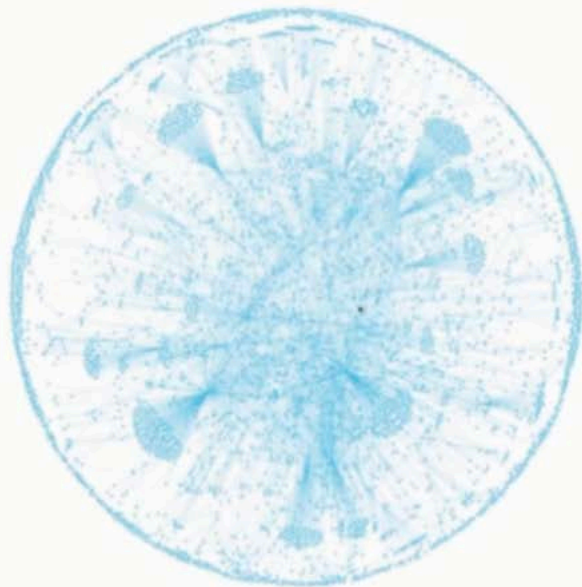
Connect Your Ecosystem



Data Cloud Growth



April 2023



April 2023

One Platform



Powering Many Workloads



Discover, access and monetize live data, services and apps in the Data Cloud



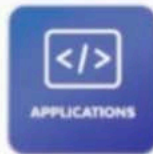
Build simple, reliable data pipelines at scale in the language of your choice



Protect your enterprise with near-unlimited visibility, unified data, and powerful analytics



Accelerate your ML workflow with fast access and elastically scalable processing



Build data-intensive applications without operational burden



Accelerate analytics for users and queries with leading price / performance and no complexity



Deploy flexible architectural patterns with governance and optimized storage at scale



Delivers a modern approach to working with transactional and analytical data together



Live Demo



WHO IS TASTY BYTES?

ABOUT US: Global food truck network, localized menu options, 15 countries, 30 major cities, and 15 core brands.

OUR MISSION

We serve to give people unique food options with high quality items in a safe, convenient and cost effective way. We ensure that the ingredients used are of the highest quality from mostly local food vendors to make sure our success has a positive impact on community partners.



OUR VISION

To become the largest food truck network in the world by 2027 that has sustainable profitability with a zero carbon footprint future that our team, customers, and communities are proud of supporting.



LOCATIONS SERVED

- USA: San Mateo, Denver, Seattle, Boston, New York City
- Canada: Toronto, Vancouver, Montreal
- United Kingdom: London, Manchester
- France: Paris, Nice
- Poland: Warsaw, Krakow
- India: Mumbai, Delhi
- Japan: Tokyo
- South Korea: Seoul
- Australia: Sydney, Melbourne



CURRENT STATE & FUTURE GOALS



WAREHOUSE MANAGEMENT



Warehouse != Data Storage
Database == Data Storage
Warehouse == Compute



Dimensions of Scaling

ACROSS

- Many competing workloads
- Resource contention
- Isolate on separate warehouses



ETL/ELT



Structured
Semi-Structured
Unstructured



Data Load



Marketing Analytics/Reporting/BI



Data Transformation

Intelligent Infrastructure:

- Logical Model
- Security
- Query Planning & Optimization
- Transactional Control

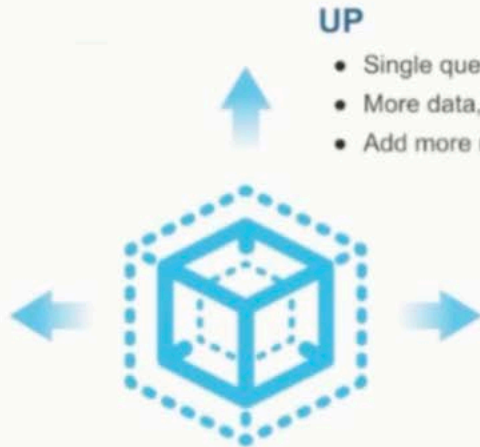
Data Science



Dimensions of Scaling

ACROSS

- Many competing workloads
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UP

- Single query performance
- More data, more complex queries
- Add more resources to the cluster

ETL/ELT



Structured
Semi-Structured
Unstructured



Data Load



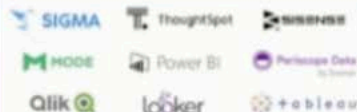
Data Transformation



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Marketing Analytics/Reporting/BI



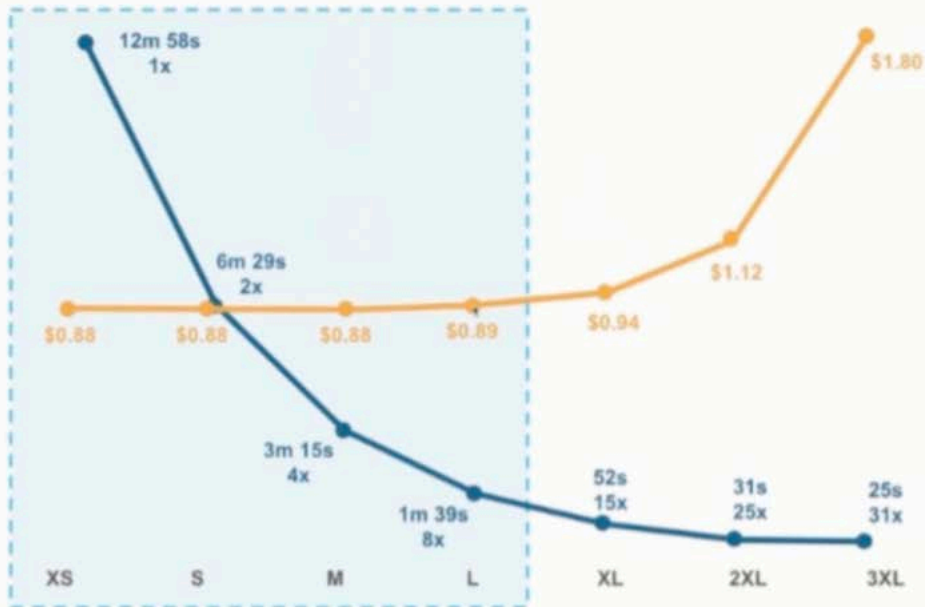
Data Science



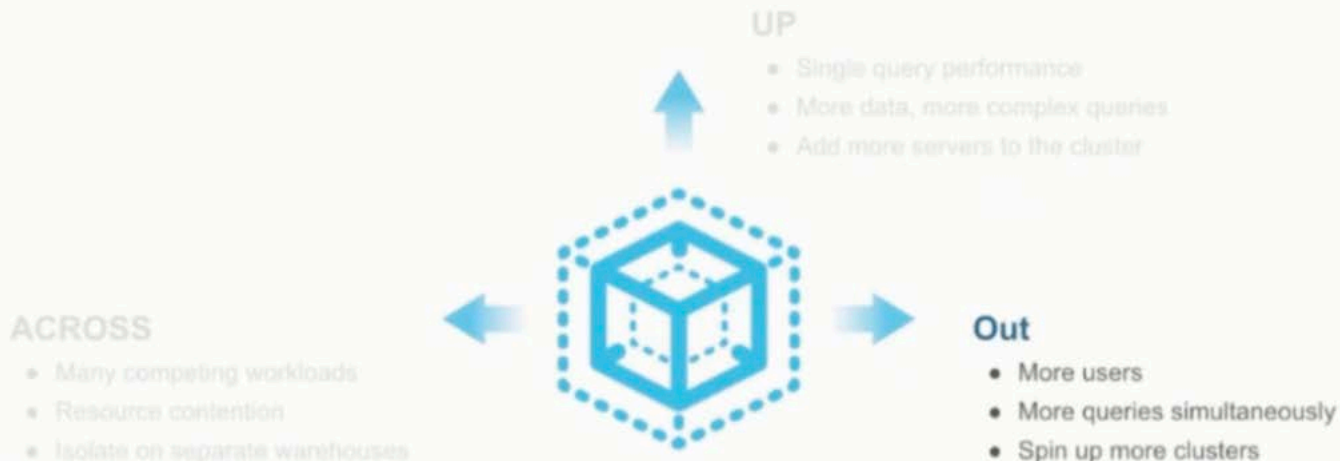
Scale Up – Loading 1BN Records

- Doubling the number of servers halves the run time
- But you pay per-server, per second of compute
- So you get your answer **8X FASTER FOR THE SAME COST**

— Cost
— Secs



3 Dimensions of Scaling



ETL/ELT



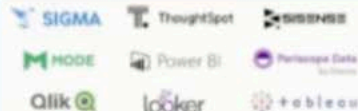
Structured
Semi-Structured
Unstructured



Data Load



Marketing Analytics/Reporting/BI



Multi-cluster

Data Transformation



Intelligent Infrastructure:

- Logical Model
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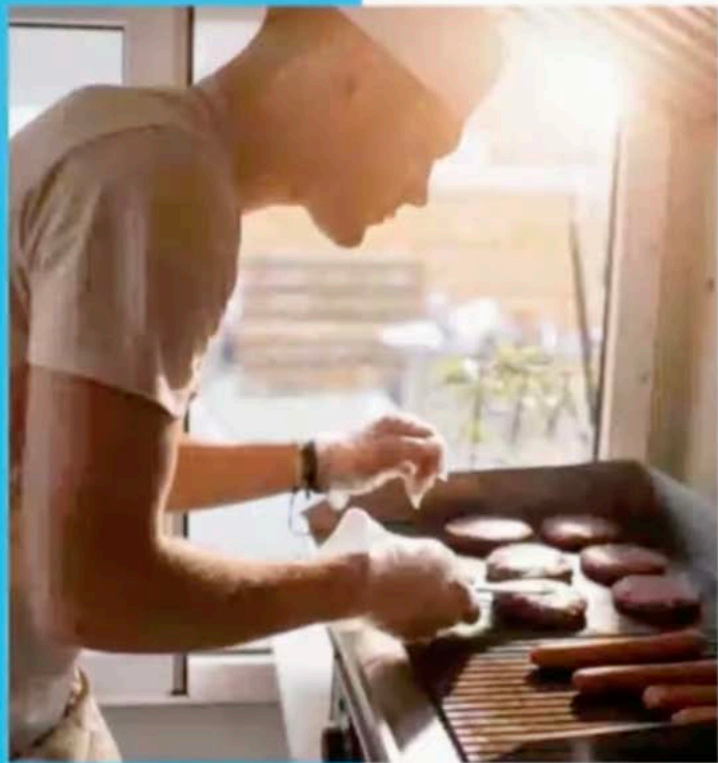
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Data Science



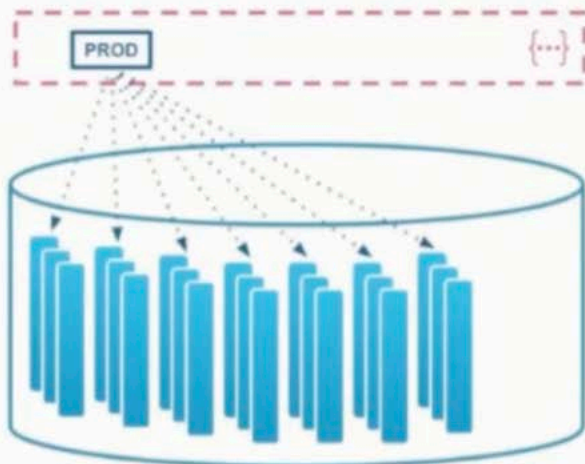
Warehouses/Compute Demo





TRANSFORMATION

Zero-Copy Cloning



The Metadata layer keeps track of every micro-partition file in every customer database.

Creating a DEV environment usually means copying the PROD database

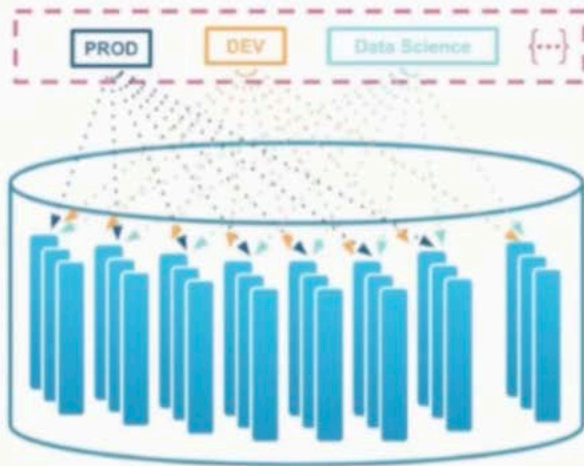
Limited to subset of full Prod

Up to 2x storage requirement

Periodic refreshes



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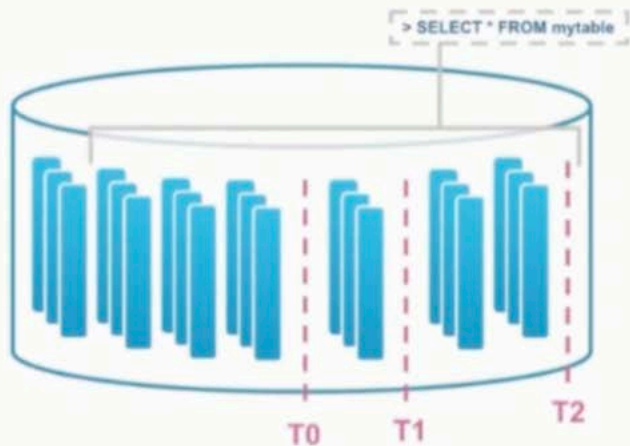
Snowflake Zero-Copy Clones

Simply "point" to the same files

Consumes zero additional storage

Changes to either DB are isolated

Time Travel



T0 – Initial state of database

T1 – update myTable set colX = Y where...

T2 – ELT job loads new data

Previous versions of data automatically retained

AT | BEFORE [timestamp | statement | offset]

CLONE AT | BEFORE to recreate a prior version

UNDROP recovers from accidental deletion

Accessed via SQL extensions

AT | BEFORE [timestamp | statement | offset]

CLONE AT | BEFORE to recreate a prior version

UNDROP recovers from accidental deletion

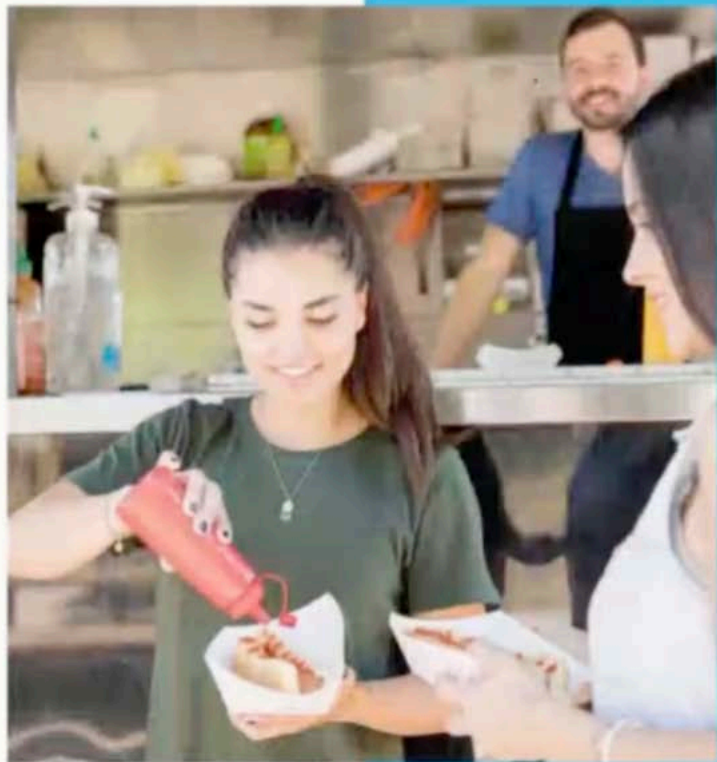


Transformation Demo



frostbyte.

COLLABORATION



Collaboration



- ✓ Any Format
- ✓ Near-Unlimited Scale
- ✓ Sharing Without Copying or Moving

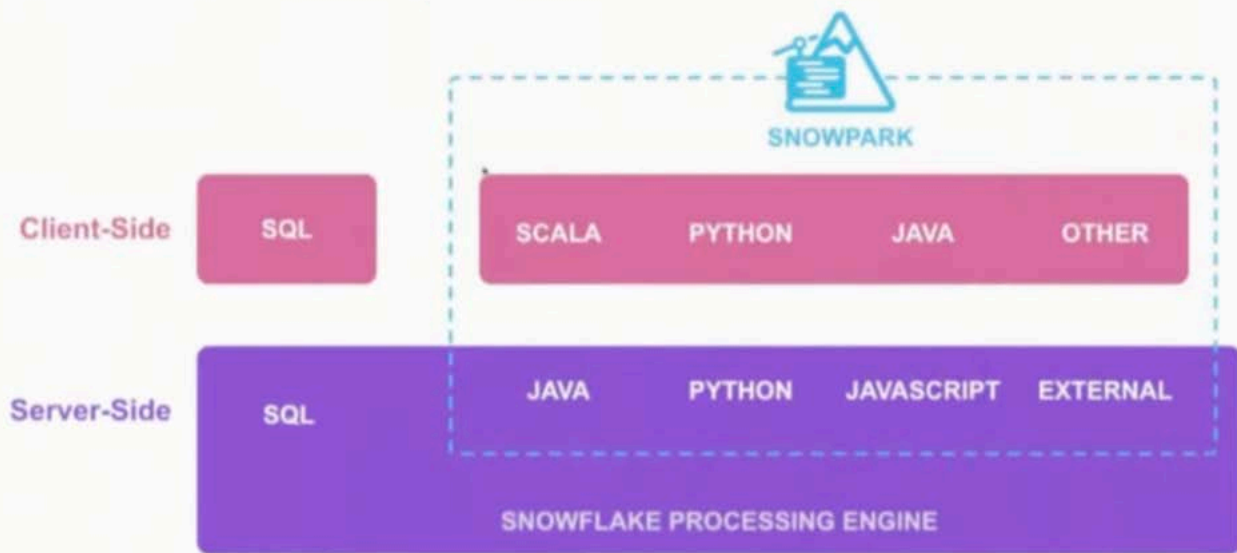
All of Your Organization's Data, on One Platform

Your Ecosystem - Partners, Suppliers, Customers

Third-Parties - Industry Datasets, Data Services, Applications



Code the Same Way, Execute Faster With Snowpark



Data Science & Machine Learning Platform



Scalable development and operations with pushdown using your tool of choice

