snowflake®

AI DATA CLOUD

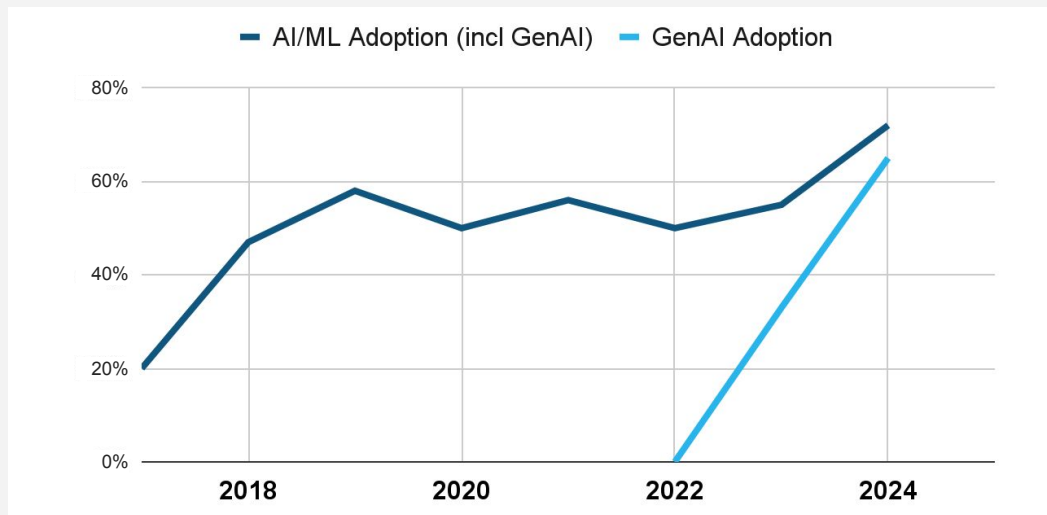**Cortex AI & Snowflake ML**

Easy. Efficient. Trusted.

2024

Enterprises Are Adopting Gen AI Fast

Predictive ML Still Important

Organizations Who Have Adopted AI/ML in 1 Business Function

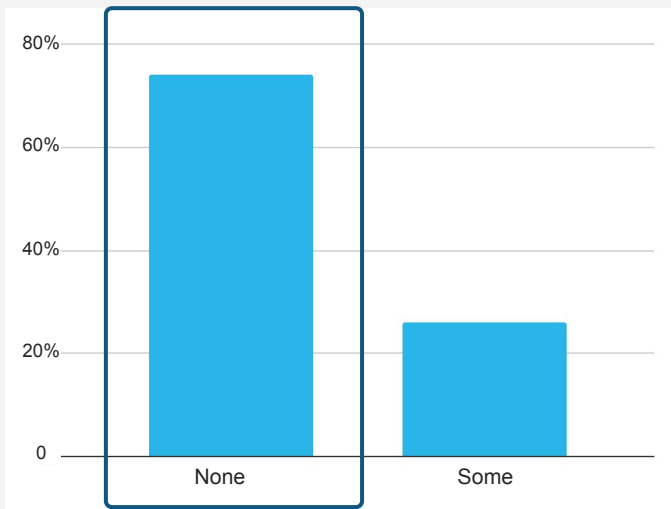— AI/ML Adoption (incl GenAI) — GenAI Adoption

Less than 2 years to achieve 65% adoption vs 10 years for ML

Enterprises adding significant and growing number of gen AI projects in addition to predictive ML

Industry Challenge: Getting Gen AI Apps into Production
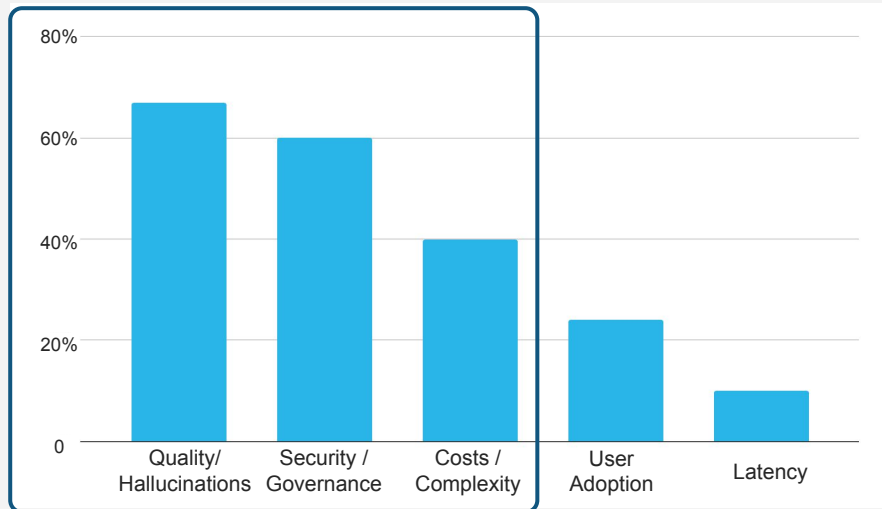
Most LLM apps are not yet in production

% of an Organization's LLM Apps in Production Today

Source: Industry Survey Results, Jan 2024

Quality, governance, and cost issues are top challenges.

Responses to Question - What are your top challenges in getting LLM apps to production?

Source: Industry Survey Results, Jan 2024

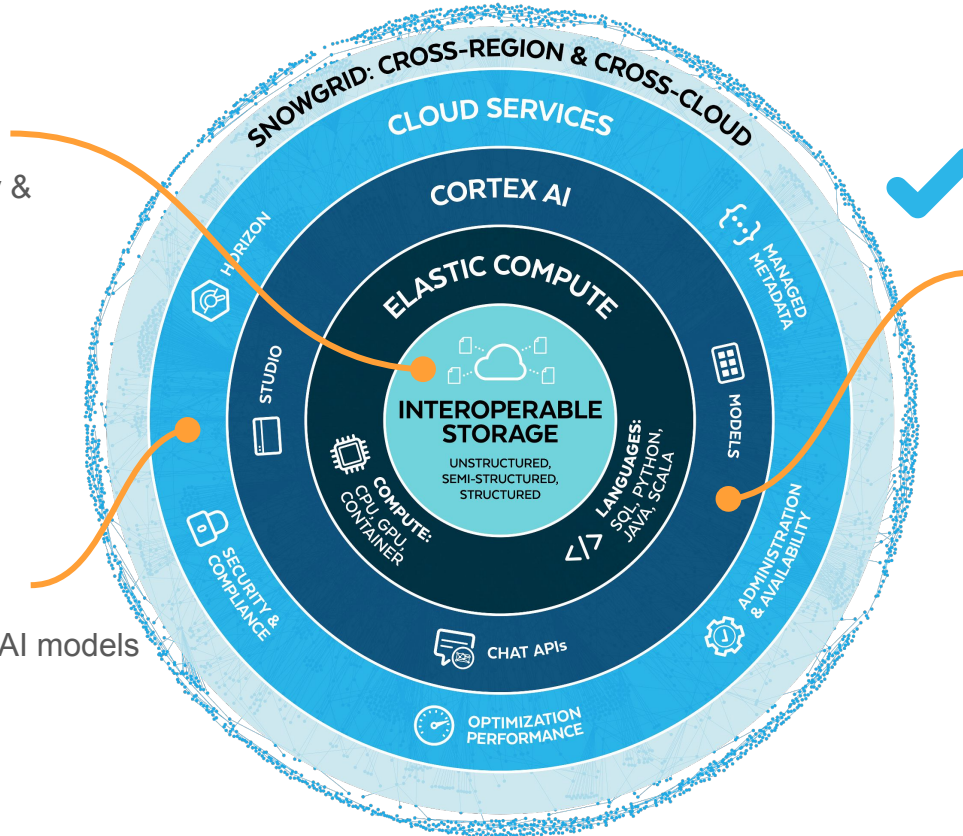**THERE IS NO AI STRATEGY, WITHOUT A DATA STRATEGY**

snowflake®

Snowflake AI Data Cloud

SOLID DATA FOUNDATION
Helps improve quality & reduce hallucinations

BUILT-IN GOVERNANCE
Secures both data & AI models

BRING AI TO YOUR DATA
Reduce complexity and optimize across quality and cost

SNOWGRID: CROSS-REGION & CROSS-CLOUD

CLOUD SERVICES

CORTEX AI

ELASTIC COMPUTE

HORIZON

STUDIO

MANAGED METADATA

MODELS

SECURITY & COMPLIANCE

ADMINISTRATION & AVAILABILITY

INTEROPERABLE STORAGE
UNSTRUCTURED, SEMI-STRUCTURED, STRUCTURED

COMPUTE: CPU, GPU, CONTAINER

LANGUAGES: SQL, PYTHON, JAVA, SCALA

CHAT APIs

OPTIMIZATION PERFORMANCE

Why Snowflake for AI/ML

End-to-End Platform for AI/ML Built to Address Industry Gen AI Challenges

APP DEVELOPMENT
Studio | Notebooks | Streamlit | Copilot

GENERATIVE AI
Cortex AI

MACHINE LEARNING
Snowflake ML

DATA & MODEL GOVERNANCE
Snowflake Horizon | Model Registry

EASY
Fully managed and tightly integrated data and AI infrastructure. Accessible via no-code Studio, SQL, Python, and REST APIs interfaces **to reduce development costs and complexity**
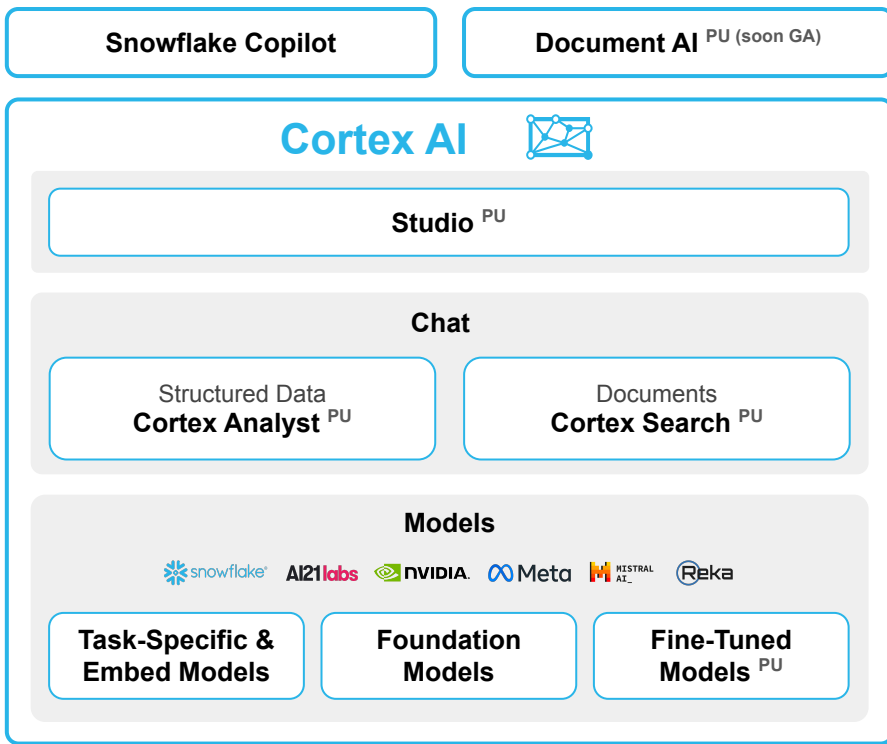
EFFICIENT
Streamline development-to-deployment lifecycle with cutting-edge AI models, frameworks, and apps running next to the data **to achieve better quality and operational cost**

TRUSTED
Protect the value of your IP at scale with **industry-leading security and unified governance for data and models** trusted by thousands of organizations

Cortex AI: Making Gen AI Easy, Efficient, and Trusted

Snowflake Copilot	Document AI PU (soon GA)

Cortex AI

Studio PU

Chat

Structured Data **Cortex Analyst** PU	Documents **Cortex Search** PU

Models

snowflake   AI21 labs   nVIDIA.   Meta   MISTRAL AI_   Reka

Task-Specific & Embed Models	**Foundation Models**	**Fine-Tuned Models** PU

POWERFUL AI APPS
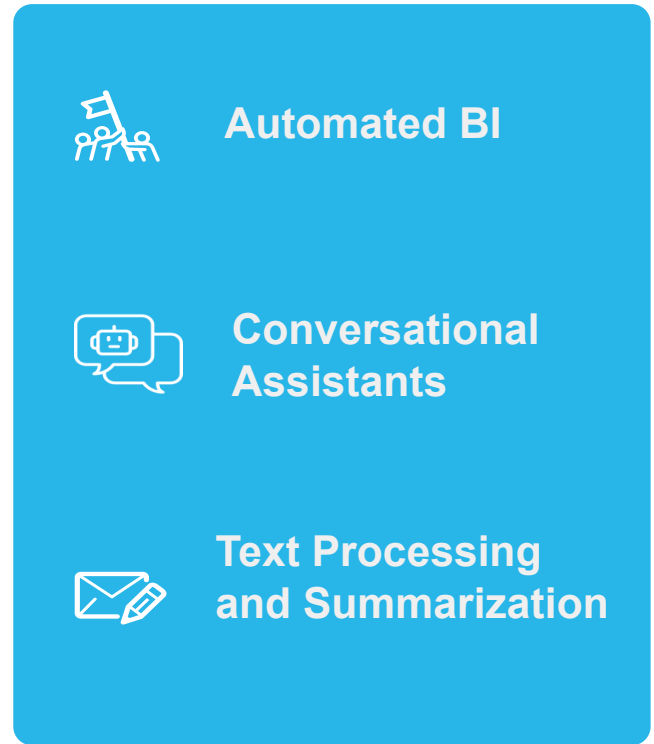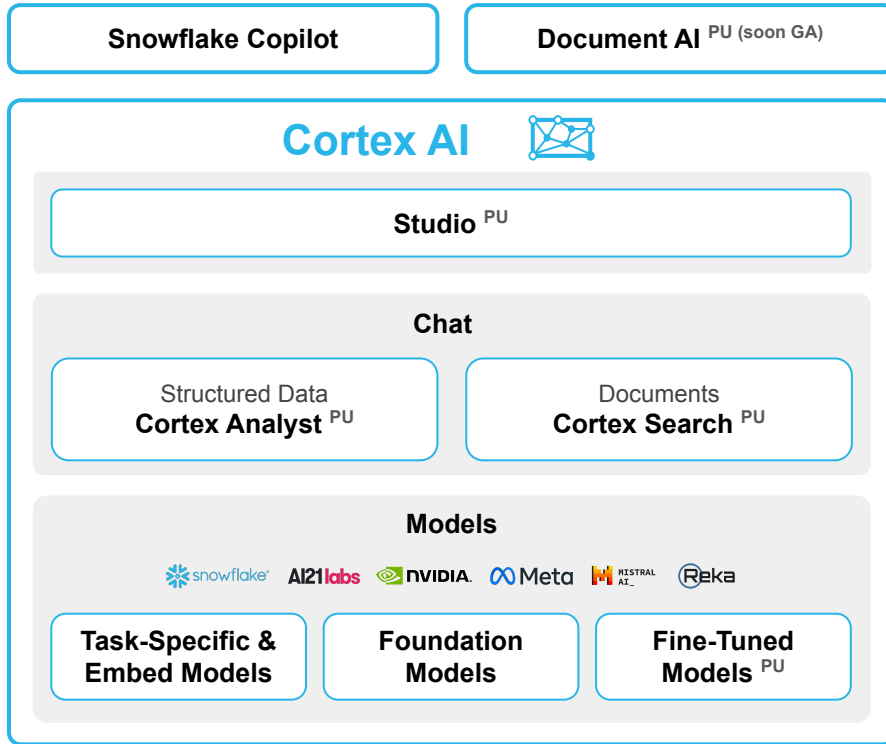No-code, powerful AI apps for code assistance, document understanding, and chatbots .

TALK TO YOUR DATA
State of the art Search and Text2SQL capabilities to build BI and AI chatbots easily.

MODELS
Top tier models, easily accessible, fully managed, tightly integrated, all inside of Snowflake.

Cortex AI Enables Your Gen AI Apps

Snowflake Copilot

Document AI PU (soon GA)

Cortex AI

Studio PU

Chat

Structured Data
Cortex Analyst PU

Documents
Cortex Search PU

Models

snowflake · AI21labs · NVIDIA · Meta · MISTRAL AI_ · Reka

Task-Specific & Embed Models

Foundation Models

Fine-Tuned Models PU

Automated BI

Conversational Assistants

Text Processing and Summarization

GA: Generally Available | PR: Private Preview | PU: Public Preview

What Are Your Top Gen AI Use Cases?

Automated BI

Business analysis with natural language

Code evaluation and generation

Conversational Assistants

Customer support assistants

Internal chat assistant

Knowledge management

Text Processing and Summarization
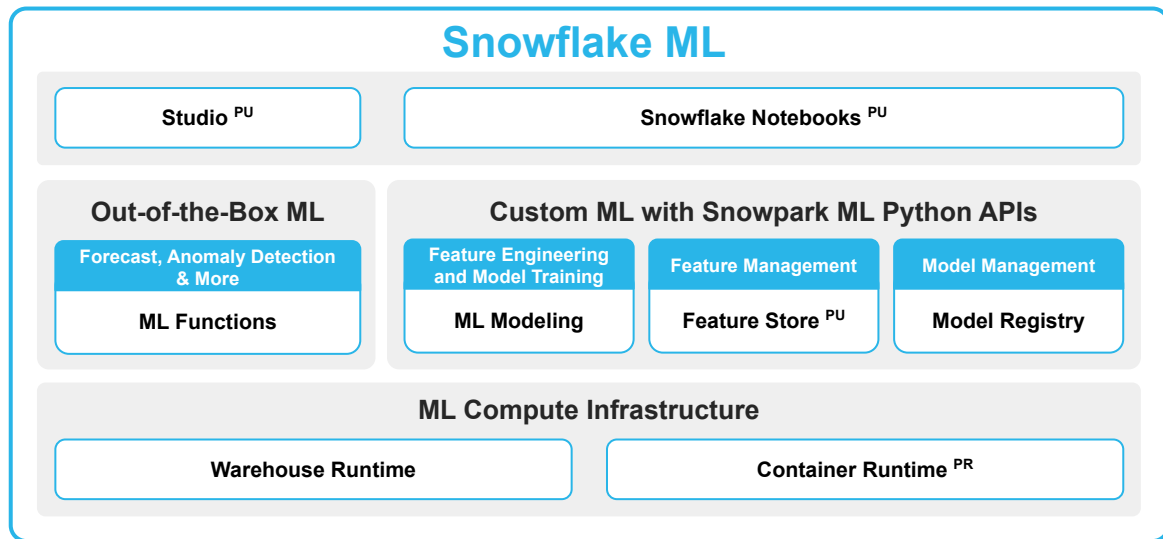
Document classification

Entity extraction

Notes summarization

Snowflake ML

Why Snowflake ML: Bring Your ML to Your Data

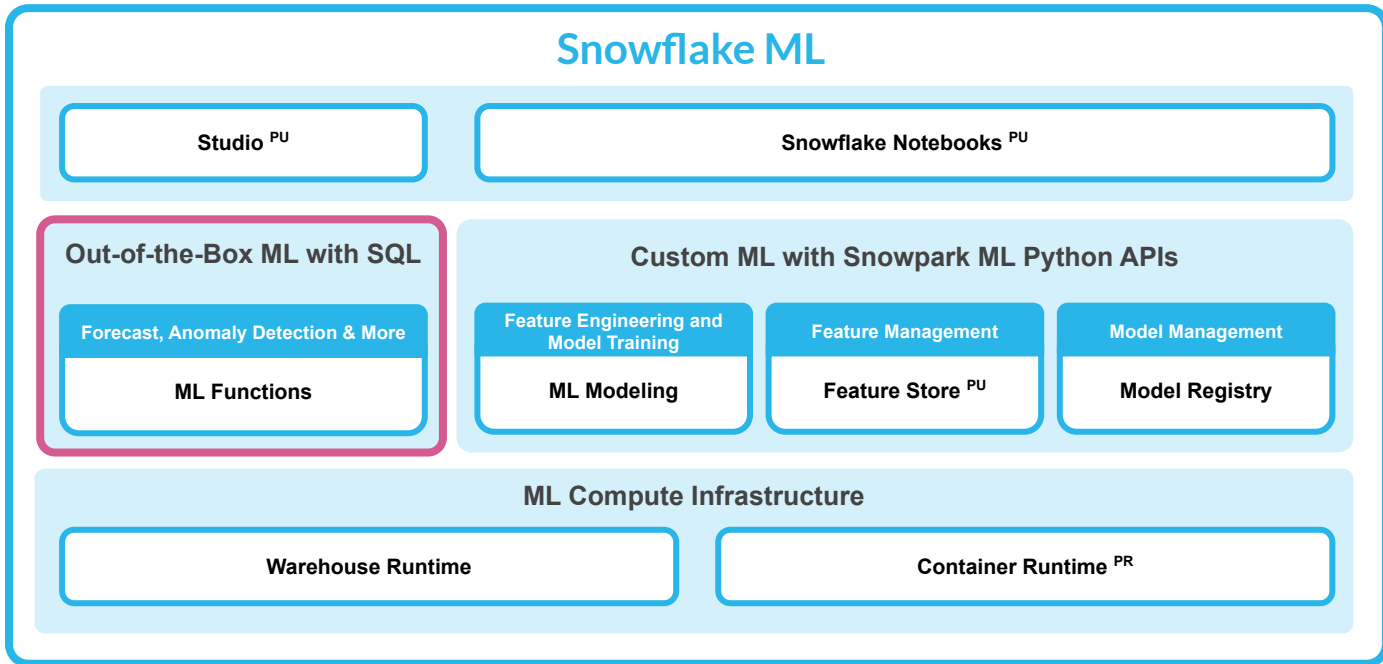Integrated set of capabilities for end-to-end ML workflows in Snowflake

Snowflake ML

Studio [PU]	Snowflake Notebooks [PU]

Out-of-the-Box ML

Forecast, Anomaly Detection & More

ML Functions

Custom ML with Snowpark ML Python APIs

Feature Engineering and Model Training	Feature Management	Model Management
ML Modeling	Feature Store [PU]	Model Registry

ML Compute Infrastructure

Warehouse Runtime	Container Runtime [PR]

- **No data movement**
- **ML operations made easy**
- **End-to-end governance**

PR: Private Preview | PU: Public Preview

Snowflake ML

Integrated set of capabilities for end-to-end ML workflows in Snowflake

Snowflake ML

Studio PU	Snowflake Notebooks PU

Out-of-the-Box ML with SQL

Forecast, Anomaly Detection & More

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Custom ML with Snowpark ML Python APIs

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ML Compute Infrastructure

Warehouse Runtime	Container Runtime PR

PR: Private Preview | PU: Public Preview

Snowflake ML Functions

WHAT IS IT

SQL functions that perform predictive analytics using machine learning under the hood

WHY USE IT

Generate predictions and insights on your structured data with the power of ML—but without its complexity

HOW TO USE IT

Use SQL function in Snowsight or expose as a custom app via Streamlit

ML Functions

`FORECAST( )`

`ANOMALY_DETECTION( )`

`TOP_INSIGHTS( )` PuPr

`CLASSIFICATION( )` PuPr

Structured Data
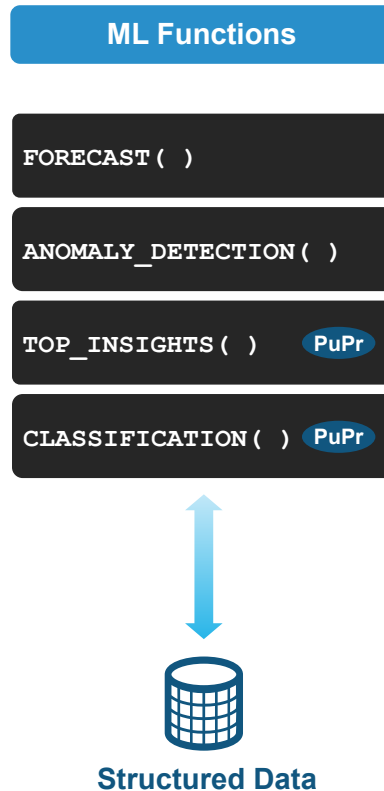
Snowflake ML Functions

SQL functions that perform predictive analytics using ML under the hood

Forecasting

Build more reliable time series forecasts with automated handling of seasonality, missing values and more

GA

Anomaly Detection

Identify outliers and trigger alerts or help find unlikely-to-happen-again situations that should be excluded from analysis

GA

Top Insights

Quickly identify drivers contributing to the change of a given metric across user defined time intervals

PUBLIC PREVIEW

Classification

Sort data into different classes (e.g., loyal customer vs. likely to churn) using supervised learning techniques

PUBLIC PREVIEW

Snowflake ML

Integrated set of capabilities for end-to-end ML workflows in Snowflake

Snowflake ML

Studio PU	Snowflake Notebooks PU

Out-of-the-Box ML with SQL

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ML Functions

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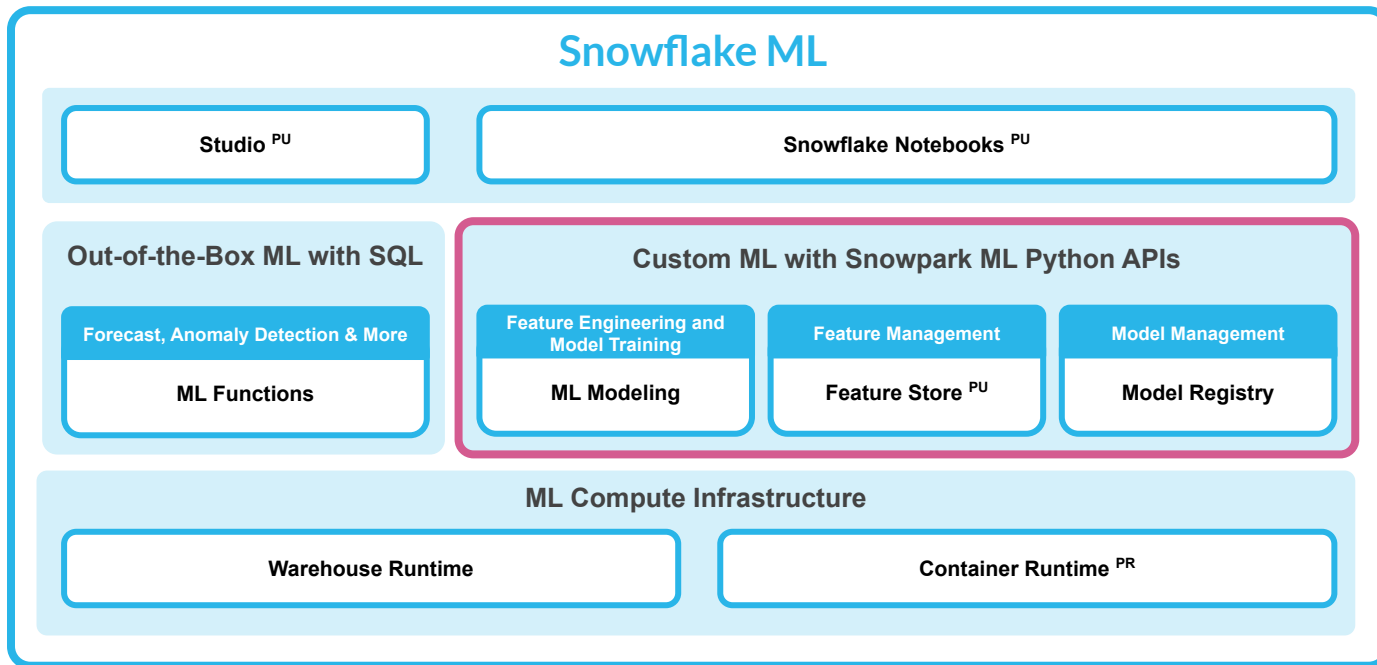
Snowflake Notebooks

WHAT IS IT

A familiar, easy-to-use notebook interface for your data work that seamlessly blends Python, SQL, and Markdown as well as integrations with key Snowflake offerings like Snowpark ML, Streamlit, Cortex and Iceberg

WHY USE IT

Simplify the process of connecting to your data and to amplify your data engineering, analytics, and machine learning workflows

HOW TO USE IT

- Create a notebook directly in Snowsight or from an existing project
- Sync with remote Git repo for version control and collaboration
- Schedule notebooks to run automated pipelines

What Are Your Top Predictive ML Use Cases?

Sales & Marketing

Propensity modeling

Lead scoring

Churn prediction

Security, Risk & Compliance

Fraud detection

Threat assessment

Verification

Forecasting, Pricing & Ads

Product demand

Price Optimization

Ad optimization

Supply Chain & Manufacturing

Supply chain planning

Anomaly detection

Predictive maintenance

THANK YOU

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