



DATA TRENDS 2024 ADVERTISING, MEDIA AND ENTERTAINMENT

How Industry Leaders are Building for Success in the Snowflake Data Cloud



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GEN AI IN ACTION

In 2023, the hype surrounding generative AI products was off the charts. But in 2024, the real work is underway as enterprises start to pour their proprietary data into large language models (LLMs) and create bespoke applications that drive their businesses in new directions.

At Snowflake, we see this trend clearly, including among some of the largest enterprises in the Global 2000. Gen AI has moved out of the experimentation phase and into production. Our recent report, [Snowflake Data Trends 2024](#), reveals how organizations have been using this transformative technology and other data-driven workloads within the Data Cloud from January 2023 to January 2024. Here are the topline results across industries:

- **The number of active accounts adopting machine learning (ML) functionality within Snowflake increased 67% since the ML functions of Snowflake Cortex went into public preview in June 2023. That opened up more possibilities because data scientists and other experts are no longer a bottleneck.**
- **Organizations' usage of data governance measures is rising and seems to be improving their ability to use data: While usage of tagging data increased 70%-100%, the number of queries against protected objects is up 142%.**
- **The number of native apps created by Snowflake users increased by 311%, while adoption of these apps soared 96%.**
- **Usage of Python, a very popular language for AI development, grew 571% — considerably more than any other language year over year.**

In this report, we'll take a closer look at Snowflake's data around the advertising, media and entertainment industry — one of the early adopters of AI and ML — to see how data-driven technologies are being deployed across this sector. We'll also explore the technologies that are making gen AI applications and granular, privacy-preserving data governance possible.

Our research for the Data Trends 2024 report also revealed how advertising, media and entertainment accounts are leveraging the tools and features within the Snowflake Data Cloud. Understanding these trends and what they signify can provide valuable clues to inform industry leaders' business strategies, planning and technology investments over the coming year.

METHODOLOGY

For this report, we looked at how our Snowflake advertising, media and entertainment accounts adopted features and capabilities of the Data Cloud over the previous fiscal year to reveal trends, both in terms of the foundational development of data infrastructure and those users' first moves into advanced AI. Where relevant, we have compared industry usage to our broader, cross-industry metrics to show both alignment and, more importantly, deviations. Generally, we compared usage in January 2023 to January 2024 to align with Snowflake's fiscal year, except in cases where features became public preview during the year. In those cases, we compared the first full month in public preview to January 2024. For the full methodology, **see the appendix.**



GENERATIVE AI: MORE REGULATIONS AND CONSUMER PRIVACY CONCERNS

The advertising, media and entertainment industry is highly regulated, and concerns about gen AI technologies are quickly causing governing bodies to put more regulations in place. In late 2023, several major initiatives established guardrails that help ensure the technology is used in a safe, secure and ethical way.

For example, in December 2023 the European Union passed the [AI Act](#), which established regulations for a wide range of AI tools and applications. The act has implications for content creation, journalism and intellectual property rights. Requirements relevant to the industry include ensuring transparency and user awareness when consumers are engaging with AI systems, and enforcing regulations on AI systems that create or edit image, audio or video content.

AI legislation within the U.S. is also increasing. The [White House Executive Order on Artificial Intelligence](#), released in October 2023, has given various government agencies and regulators, including the Secretary of Commerce, [180 days](#) to incorporate an AI Risk Management Framework. In addition, U.S. legislators introduced [no fewer than 190 AI-related bills](#) in 2023, with [more likely to come in 2024](#).

In an industry rife with consumer privacy expectations, gen AI also introduces an added layer of data privacy concerns due to its ability to process personal data and generate information that may be sensitive (for example, a customer's home address). Among the industry's key concerns are preventing the unintended exposure and generation of personally identifiable information, ensuring compliance with relevant data privacy laws (such as [GDPR](#), [CPRA](#), [CCPA](#) and the [Digital Services Act](#)), and putting robust data security practices into place.

The increased attention regulators are paying to AI makes effective data governance more critical than ever. And that is exactly what we see in our [Data Trends 2024 report](#).

Advertising, media and entertainment companies must have a strong data foundation to operate smoothly, maintain regulatory compliance and compete at the highest level. In our rapidly evolving AI era, this requirement is quickly becoming a strategy integral to an enterprise's success. A robust data foundation includes a unified data platform that eliminates data silos and helps ensure strict data governance, all while facilitating the seamless collaboration of structured, unstructured and third-party data.

THREE POTENTIAL CONCERNS SURROUNDING GENERATIVE AI

Generative AI shatters our previous view of what's possible with data. This transformative technology is widely anticipated to have a [positive impact](#) across all industries, especially in advertising, media and entertainment. But it also comes with a number of [potentially serious risks](#). Here are the major concerns you should know about:

- 1 Lack of transparency:** The training data for a model is often unknown or undisclosed, making it difficult to determine if the data is biased or based on unreliable sources. The neural networks used to build LLMs are also often "black box" applications, where the inner workings are opaque or unknown even to the people who designed them. Many experts believe future government regulations will require gen AI models to demonstrate how they make decisions.
- 2 Unintentional bias:** All ML models contain the potential for bias in their training data, algorithms and design. For example, models may be trained on data sets that reflect societal biases, skewing results in ways that negatively impact certain demographic groups.
- 3 Copyright infringement:** Gen AI chatbots used by the public have been shown to expose intellectual property, media assets or other sensitive company information uploaded by users. These bots may also unintentionally repeat or copy what they have learned in their training data — a flaw known as "regurgitation" — without accounting for the implications. There is also increasing controversy around what materials should be used to train models.



TRENDS THAT MATTER FOR ADVERTISING, MEDIA AND ENTERTAINMENT COMPANIES

Advertising, media and entertainment companies are using data analytics and AI/ML tools more frequently. They're also using data in different ways and volumes than we're seeing in other industries. Our research identified three notable trends that show how data is having a foundational impact on these companies — influencing approaches to everything from business strategy and technology investments to maximizing marketing ROI and ad spend.



TREND ONE:

ENTERPRISES ARE GETTING MORE GRANULAR IN THEIR DATA GOVERNANCE

With serious consumer privacy concerns mounting alongside a staggering increase in AI regulations, it's no surprise that advertising, media and entertainment companies prioritize data governance. In the Snowflake Data Cloud, we see these factors impacting the use of tagging (to identify sensitive policy-protected data) and masking (to restrict access to policy-protected data).

In the last fiscal year, the industry saw a 85% increase in the number of queries accessing policy-protected data (including the use of object tagging, row access policies, masking policies, tag-based masking, dynamic data masking and conditional masking). As the graph below shows, the industry relies more heavily on applying masking or row-access policies than the cross-industry average. This increase is likely driven by compliance requirements associated with a host of regulations (including CCPA, CCRA and GDPR).

Because of long-standing consumer concerns combined with many strict data and consumer privacy laws being in place for many years, it's understandable for the industry to have put strict data governance protocols in place. It's also key to note, however, that the added governance practices are not restricting organizations from unlocking value from their data.

Advertising, media and entertainment companies are adept at using data and robust data governance policies and practices. They have years of experience and expertise in effectively governing data, because they are motivated by the possibility of fines and potential reputational damage. This healthy paranoia of bad data governance sets the industry up well for success as it expands its use of AI.

NUMBER OF APPLIED MASKING OR ROW-ACCESS POLICIES



NUMBER OF COLUMNS WITH ASSIGNED MASKING POLICIES



TREND TWO:

ENTERPRISES ARE TAPPING INTO UNSTRUCTURED DATA

Enterprises are major contributors to the world's estimated **147 zettabytes of data** (2024 projection). Of all the data in enterprises' ecosystems, **80% to 90%** is unstructured. As data volumes continue to skyrocket, partly due to the growing number of AI applications generating data, companies will need to become more sophisticated in how they manage and leverage this type of data. By its very nature, the advertising, media and entertainment industry has massive amounts of unstructured data, including videos, audio files, social media posts, emails and texts.

Across all industries within the Snowflake Data Cloud, the processing of unstructured data increased by 123%, comparing averages in January 2023 and January 2024, following the public preview debut of related features in Snowpark on June 27, 2023. Comparatively, the volume of this kind of data processed by the advertising, media and entertainment industry increased 536% for the same period.

This industry relies heavily on unstructured data for advanced analytics to identify trends and business-critical insights based on customer preferences, feedback and behavior. These insights provide advertising, media and entertainment companies with a deeper, more granular understanding of customer needs and how to improve experiences — enhancing nearly every aspect of a business.

Unlike in some industries, advertising, media and entertainment companies have a veritable treasure trove of unstructured data from their products and services alone, and they use it to their advantage.



TREND THREE:

PYTHON USAGE IS UP DRAMATICALLY

Python is widely considered **the preferred language** for building AI apps and has been a developer favorite for years. It's not surprising, then, that it was the most commonly used scripting language over the 12 months between January 2023 and January 2024 in Snowpark, the coding library component of the Snowflake Data Cloud.

During the report period, advertising, media and entertainment companies' use of Python increased by **478%**. In an industry where every customer interaction and the slightest competitive advantage matters, Python helps advertising, media and entertainment companies get more value out of their data.

PYTHON USAGE IN ADVERTISING, MEDIA AND ENTERTAINMENT INCREASED

478%



THE STATE OF THE MEDIA DATA CLOUD

Leading advertising, media and entertainment companies use Snowflake. Companies throughout the sector — from adtechs and agencies to sports teams and video game companies — account for a significant portion of Snowflake's Data Cloud.

These companies trust the Data Cloud as a strategic ally in creating comprehensive, 360-degree views of their customers, maximizing marketing ROI, building adtech capabilities, enabling privacy-preserving advertising and helping comply with regulatory guidelines.

The need for a unified, secure, cloud-based platform that can handle vast amounts of data continually increases as developers put more AI applications into production and bring more AI/ML work into Snowflake. Fortunately, Snowflake was built to address this need. It allows companies to scale multiple workloads across their entire data stack using a single data copy, delivering a unified source of truth without the need to extract, transfer and load data from existing warehouses or data lakes. With data sets available for audience targeting, personalization, identity resolutions and content optimization, the Data Cloud connects and shares data with providers such as LiveRamp, Acxiom and ReachBase.

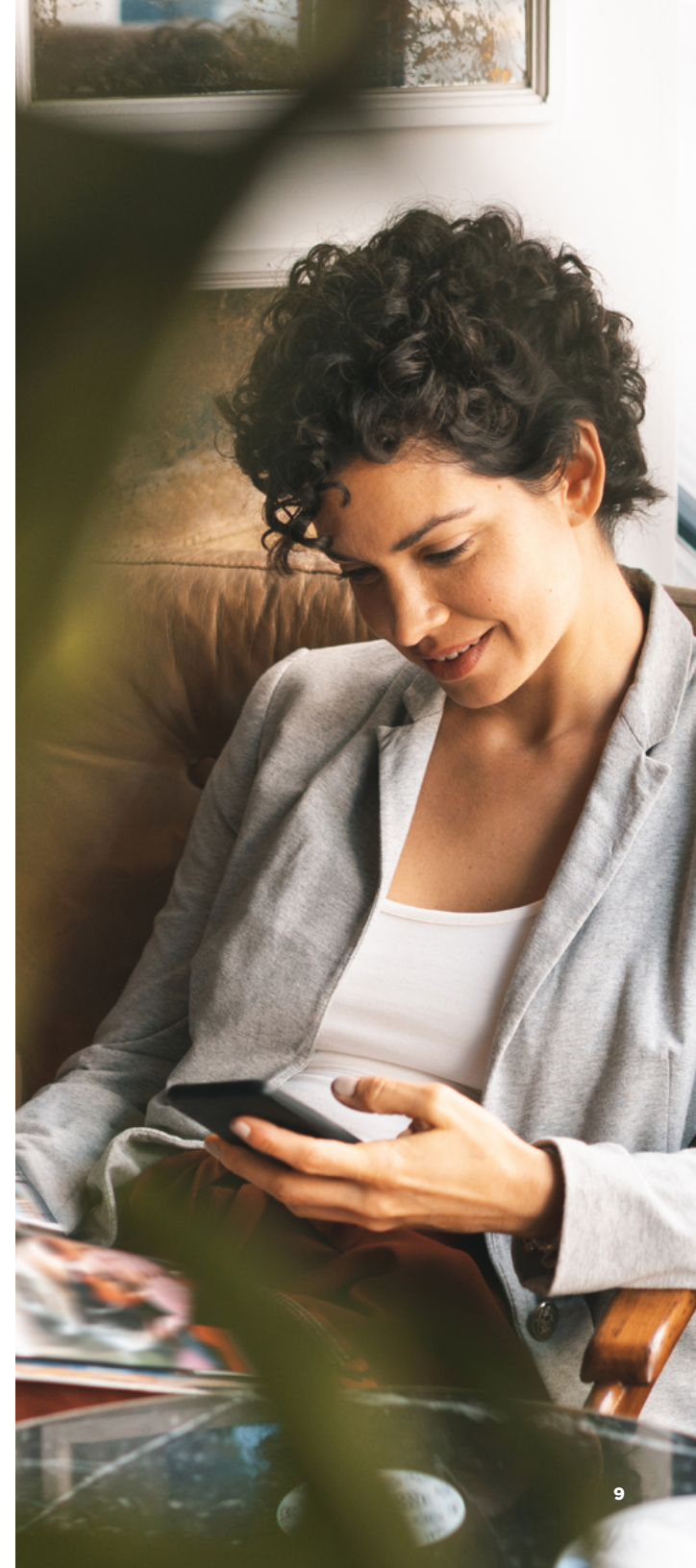
In response to regulatory requirements and fierce competition, advertising, media and entertainment companies need a strong enterprise ecosystem that

makes it possible to collaborate on data seamlessly throughout the business. They also need to share data with agencies and partners, many of which use different or multiple globally dispersed cloud platforms. Snowflake helps advertising, media and entertainment companies share data easily, regardless of distance, thanks to its ability to work with any cloud provider. Snowflake also makes advertising, media and entertainment companies more efficient, and their operations more cost effective, through the Data Cloud's ability to share data in near real time, which expedites data sharing and collaboration.

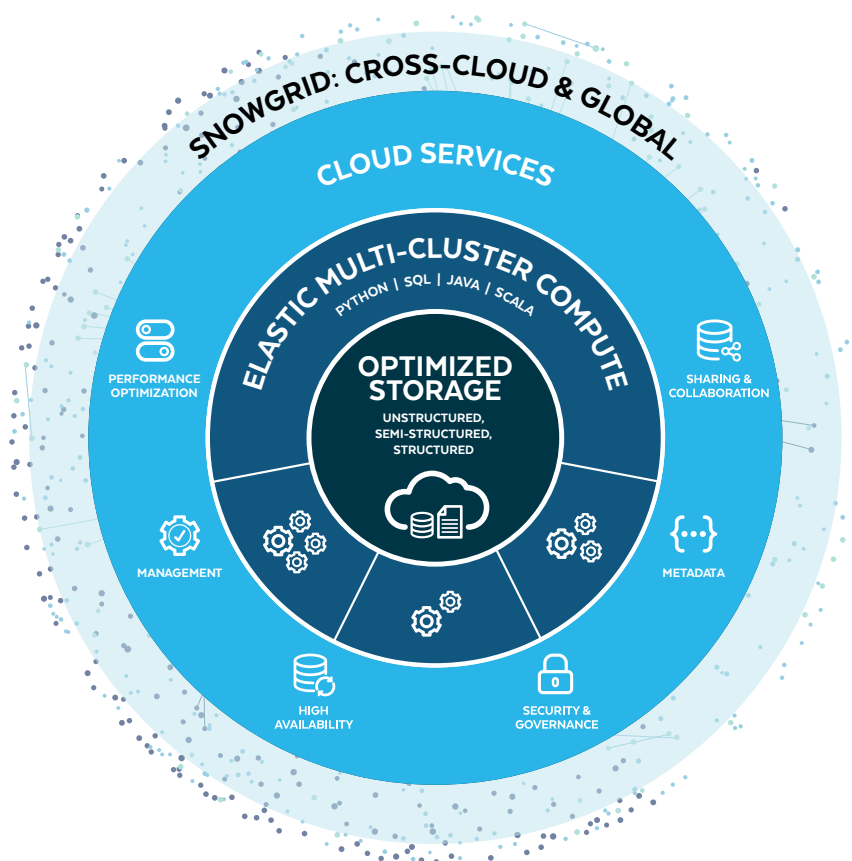
Since security and governance are two major concerns for the industry, strict controls are required in these areas. Snowflake's ability to share data exclusively within the Data Cloud without replication increases the platform's security compared to legacy data-sharing methods such as File Transfer Protocol, Secure File Transfer Protocol or email.

And in this rapidly evolving business landscape, the Snowflake Media Data Cloud offers other important advantages over competing solutions:

- **Scalability:** Snowflake's easy-to-use, unified platform allows advertising, media and entertainment companies to build connected data ecosystems, access leading data and app providers, and work with top solution partners and service providers. The Data Cloud also powers many different workloads — such as AI/ML, collaboration and cybersecurity — at scale, and the “pay for what you use” model helps companies better manage costs.



- **Customizability:** Advertising, media and entertainment companies can quickly, securely and easily customize their generative AI and LLM solutions with the Data Cloud. They can also bring or keep these solutions in-house, allowing them to securely govern policy-protected data and safeguard their intellectual property, adding an extra layer of protection and oversight.
- **Accessibility:** Enterprises can quickly benefit from the AI insights Snowflake delivers, and the technology's ease of use and natural language processing capabilities ensure that data-driven decision-making is accessible to anyone in your organization — not just data scientists and AI experts. Answers to complex questions that took weeks or months to solve before are just a click away, regardless of your role or team, thanks to the Snowflake Media Data Cloud.



Snowflake Platform Architecture

FOUR POTENTIAL BENEFITS OF GEN AI FOR THE ADVERTISING, MEDIA AND ENTERTAINMENT INDUSTRY

Although generative AI is a new technology, its applications immediately offer a wide variety of benefits and potential use cases for advertising and media companies.

- 1 **Optimize advertising revenue:** Gen AI and LLM apps can intelligently scale and optimize ad campaigns by automating audience targeting, facilitating A/B testing, and improving ad copy and content optimization.
- 2 **Content licensing and distribution:** AI solutions can build custom lifetime value models that integrate data from all account and partner touchpoints within a data clean room, using its natural language processing interface to reduce the load on business intelligence teams. They can also simplify licensing by optimizing content licensing and rights management processes.
- 3 **Optimize customer experience:** With AI, companies can develop intelligent algorithms that predict audience preferences, automate content creation and enhance user experiences. It's also commonly used today in advanced customer support chatbots.
- 4 **Make faster decisions:** Gen AI can quickly analyze and summarize reports, documents, emails, customer forms, phone and video calls, and other unstructured data. This can save employees hours if not days each week, and ultimately lead to better and faster decision-making.



HOW MEDIA COMPANIES ARE USING DATA COLLABORATION TO SOLVE CRITICAL BUSINESS CHALLENGES

The Snowflake Media Data Cloud accelerates and transforms how companies turn vast amounts of disparate data into a strategic advantage. Integral to the Data Cloud is secure data sharing and collaboration. And [Snowflake Marketplace](#), where companies find, try and buy data and [Snowflake Native Apps](#), totaling over 2,400 products and services, to deliver leading-edge business solutions (as of January 31, 2024). Although the industry uses data in myriad ways, here are three key ways advertising, media and entertainment companies can use data sharing and collaboration to innovate and solve business-critical challenges.

1. Create 360-degree views of customers

Advertising, media and entertainment companies must provide exceptional customer experiences to stay competitive. Essential to creating those experiences is achieving a holistic, [360-degree view of the customer](#), including their needs, preferences and behaviors. This allows marketers, customer experience managers and content creators to personalize customer interactions, predict customer content preferences and deliver just the right content at just the right time.

While the industry has a lot of first-party customer data at its fingertips, it relies heavily on the ready availability of third-party data to create comprehensive customer profiles. Here are some Snowflake Marketplace partners offering data sets that allow companies to achieve 360-degree customer views:

- **LiveRamp:** LiveRamp is the leading connectivity platform and data provider brands and their partners use to deliver exceptional experiences and innovative products. LiveRamp's suite of identity products is the key to building a unified customer view and enabling sophisticated analytics and activation use cases.
- **Comscore:** Comscore demographics provide accurate and scalable age, gender, generational and multi-cultural data to help marketers more effectively reach key audiences and surpass in-target goals. Comscore leverages multiple massive data assets to identify the right demographic audience.
- **Zeta:** Zeta is a leading martech software and data provider whose Customer Growth Intelligence application helps companies gain critical insights into their customers' and prospects' behavioral patterns, channel availability, transaction category, price sensitivity and more. Zeta's ID graph contains profiles on over 235 million Americans.



2. Optimize advertising effectiveness

Brands and ad agencies continually struggle to optimize their advertising spend budget in today's crowded and competitive marketplace. To succeed, marketing and advertising teams must prove the value of their investments and get data-driven insights on where to direct their dollars for optimal return on ad spend. Achieving this level of strategic decision-making and ROI requires increasingly leveraging the insights and targeting capabilities third-party data provides. Here are some Snowflake Marketplace partners offering data sets that allow companies to improve their ad effectiveness:

- **Axiom: Match Multiplier.** Axiom's Match Multiplier application and data sets augment companies' first-party data with additional touchpoints before activating online advertising campaigns, allowing them to scale as needed to achieve their campaign goals. Axiom's ethically sourced, addressable recognition data helps improve downstream match rates of companies' first-party data.
- **StackAdapt: Customer Data Activation for Display Campaigns.** Display remains an essential component in many marketers' toolkits to increase campaign reach by creating and segmenting audiences. With StackAdapt, companies can access inventory across 40-plus exchange partners, and StackAdapt supports all standard ad dimensions, HTML5 and third-party ad tags at no additional cost.
- **Experian Marketing Services: Identity Resolution.** Experian Identity Resolution is an identity service that gives companies access to Experian's rich referential identity data to resolve disparate data. It unlocks new audience insights among distributed data without having to leave the cloud infrastructure in which the data currently resides.

3. Improve subscriber experiences and grow lifetime value

Competition for subscribers continues to be fierce. More media companies are releasing new offerings from subscription video on demand (SVOD) to video games, and incumbents are fighting it out for the same subscribers while incomers are tapping into new audiences. With hundreds of publishing and video game companies vying for viewers' time, attention and wallets, media companies are increasingly focusing on improving the subscriber experience and growing **lifetime customer value.**

But achieving both goals requires a wide array of first- and third-party data to create 360-degree views of customers to power such in-house analytics. With this capability, they can better understand changing customer preferences to attract and retain them more easily, allowing companies to compete more effectively. Here are some Snowflake Marketplace partners offering data sets that allow media companies to achieve these capabilities:

- **Lockr: Identity lockr for Publishers.** Identity lockr ensures publishers are collecting an authenticated and deliverable email address for new subscribers, preventing registration with throwaway emails that could be disabled at any point.
- **Braze: Braze Engagement Benchmarks.** Braze Engagement Benchmarks give Snowflake users access to industry-by-industry data on message engagement, app retention, user acquisition and purchasing behavior, updated daily.
- **Snowplow: Snowplow Digital Analytics.** Snowplow Digital Analytics empowers organizations to create a scalable, first-party data foundation so marketing and data teams can effectively analyze and tackle customer 360 use cases, such as customer acquisition, engagement, segmentation and retention.

SNOWFLAKE MARKETPLACE

There are more than 2,400 data products and Snowflake Native Apps on Snowflake Marketplace. Snowflake Marketplace also offers data sets tailored to a wide variety of specific business needs. Here's a brief overview of the other data categories it offers:

- Audience segmentation
- Demand forecasting
- Commerce
- Identity resolution
- Market analysis
- Marketing
- Personalize customer experiences
- Subscriber acquisition and retention

To view the complete list, visit [Snowflake Marketplace](#).



PREPARING FOR THE AI FUTURE

It's clear from our survey that 2024 will be the year when generative AI becomes a crucial component of the advertising, media and entertainment industry's tech stack, fueling improved data-driven decision-making and helping leaders solve critical business challenges. Unified data management and robust governance will also be essential to success, both for advertising, media and entertainment companies and the greater business community.

Today's forward-thinking organizations are creating more complex LLM applications, making AI more available across the enterprise, and capitalizing on the benefits of a unified, global data platform. Thanks to the power of Data Cloud, the hype surrounding AI is beginning to transform into true business benefits.

[Learn more](#) about how to build for success and prepare for the AI future with the Media Data Cloud.





APPENDIX: METHODOLOGY

The Snowflake Data Trends 2024: Advertising, Media and Entertainment report is generated from fully aggregated, anonymized data detailing usage of the Snowflake Data Cloud and its integrated features and tools. In this report, we examine patterns and trends in data and AI adoption across Snowflake's advertising, media and entertainment accounts. These trends provide insight into the state of data and AI, including which technologies are the fastest growing within the advertising, media and entertainment landscape. Note that usage attributable to internal consumption, if any, has been removed and is not reflected in any of the metrics contained herein. The accounts and usage reflected in this report include both longtime Snowflake users and others who only recently joined the Data Cloud.

Except where noted in the text, the data in this report compares monthly averages from January 2024 (represented as "this year") to averages in January 2023 ("last year"). When compared, this is depicted as "year over year" growth to align with Snowflake's fiscal year-end, though the figures themselves are only representative of January figures to calculate growth.

When possible, we have provided these year-over-year comparisons to showcase growth trends over time. Where data was drawn from Snowflake features that became publicly available after the start of the fiscal year, data was collected and compared as of the first full month after which the feature became available in public preview, and that date is noted in the text. Notably, growth figures for features moving into public preview are expected to be considerably higher, as private previews are limited in scope and necessarily restricted to select Snowflake customers.





ABOUT SNOWFLAKE

Snowflake enables every organization to mobilize their data with Snowflake's Data Cloud. Customers use the Data Cloud to unite siloed data, discover and securely share data, and execute diverse artificial intelligence (AI) / machine learning (ML) and analytic workloads. Wherever data or users live, Snowflake delivers a single data experience that spans multiple clouds and geographies. Thousands of customers across many industries, including 691 of the 2023 Forbes Global 2000 (G2K) as of January 31, 2024, use the Snowflake Data Cloud to power their businesses.

Learn more at snowflake.com



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