PitchBook

EMERGING TECH RESEARCH

Artificial Intelligence & Machine Learning Report

VC trends and emerging opportunities

Q1 2024

REPORT PREVIEW
The full report is available through the PitchBook Platform.

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Q1 2024 timeline

VC deal

February 16

Graphics processing unit (GPU) cloud startup Lambda raises a $320.0 million Series C led by US Innovative Technology Fund, increasing its valuation by 7.1x for a $1.5 billion post-money valuation.

News

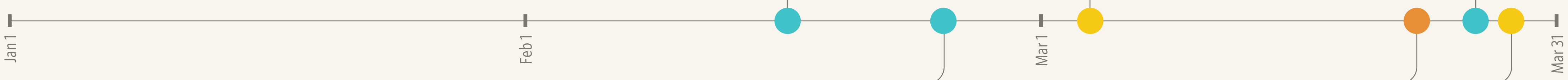
March 4

Anthropic announces the Claude 3 model family, which rises to the top of LLM performance leaderboards with three levels of cost and performance. The announcement is closely followed by the release of the second tranche of Amazon's committed investment in the company.

VC deal

March 26

Silicon photonics innovator Celestial AI reaches a $1.2 billion post-money valuation in a round led by US Innovative Technology Fund.



VC deal

February 26

Foundation model innovator Mistral AI raises its valuation by 6.1x, resulting in a $2.0 billion post-money valuation, in a round led by Andreessen Horowitz, General Catalyst, and Lightspeed Venture Partners.

VC exit

March 20

Datacenter connectivity company Astera Labs achieves a $5.5 billion exit in an IPO after raising only $232.3 million in VC.

News

March 27

Databricks launches DBRX, a high-performance open-source LLM, to compete with low-cost large models like GPT-3.5 and large open-source models. The leadership of this model has since been challenged by Llama 3.

Q1 VC deal activity

1,779
total deals

$21.6B
total VC raised

-7.8%
deal value growth QoQ

2024 YTD summary

1,779
total deals

$21.6B
total VC raised

-31.2%
deal value growth QoQ

AI & ML landscape

1. Horizontal platforms
2. Vertical applications
3. Semiconductors
4. Autonomous machines

AI & ML VC ecosystem market map

This market map is an overview of venture-backed or growth-stage companies that have received venture capital or other notable private investments. Click to view the full map on the PitchBook Platform.

1 Horizontal platforms

AI automation platforms

AI core

Computer vision

Foundation models

Natural language technology

2 Vertical applications

Consumer

Healthcare

IT

Financial services

Industrial

Transportation

3 Semiconductors

GPU cloud

Intelligent sensors & devices

Edge AI software

Processor design

4 Autonomous machines

Autonomous vehicles

WAYMO, 华人运通 HUMAN HORIZONS, AIWAYS, WeRide 文远知行, WAYVE, momenta, pony.ai, 阿维塔 AVATR, Applied Intuition

Intelligent robotics

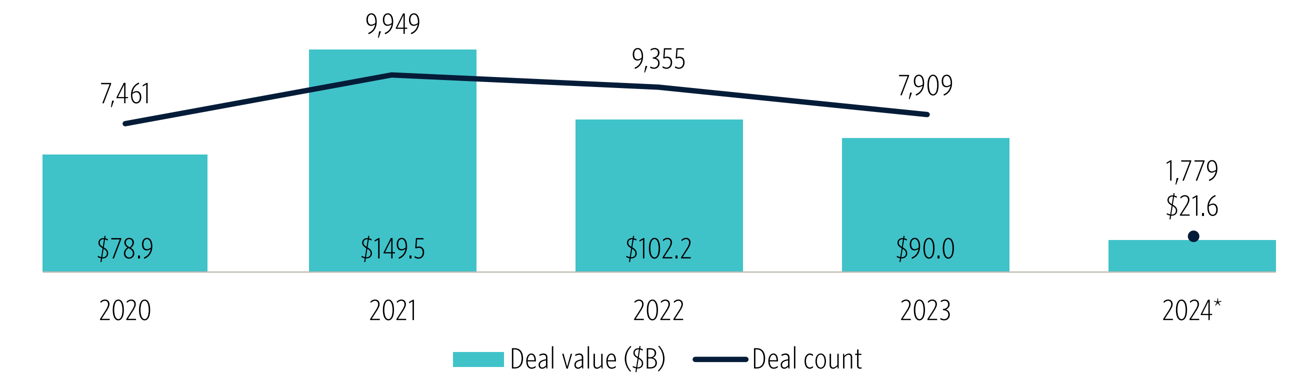
ANDURIL, nuro, Shield AI, FIGURE, Skydio, 达闼, Geek+, AGILE ROBOTS, EPIRUS, covariant

VC activity

Q1 2024 extended AI's run of outlier-fueled deal totals. Out of the $21.6 billion in AI & ML VC funding in the quarter, we attributed $5.3 billion to foundation model megadeals for Anthropic, Mistral AI, and xAI. Thus far in Q2 2024, xAI and Mistral AI are already continuing the trend of megadeals, suggesting that financial VCs can continue the momentum set by corporate VC investors last year. Though it invested $650 million while hiring the team, Microsoft's takeover of Inflection AI did not add to this total, but the deal demonstrated the strong position of corporates with the companies they have invested in. Leading LLM performance and access to unique datasets can justify large deals, with pure talent concentration becoming less important given the underperformance of some promising teams. The focus on early-stage leaders shows up in the median early-stage pre-money valuation exceeding the late-stage median, reaching $55.0 million across 78 recorded valuations.

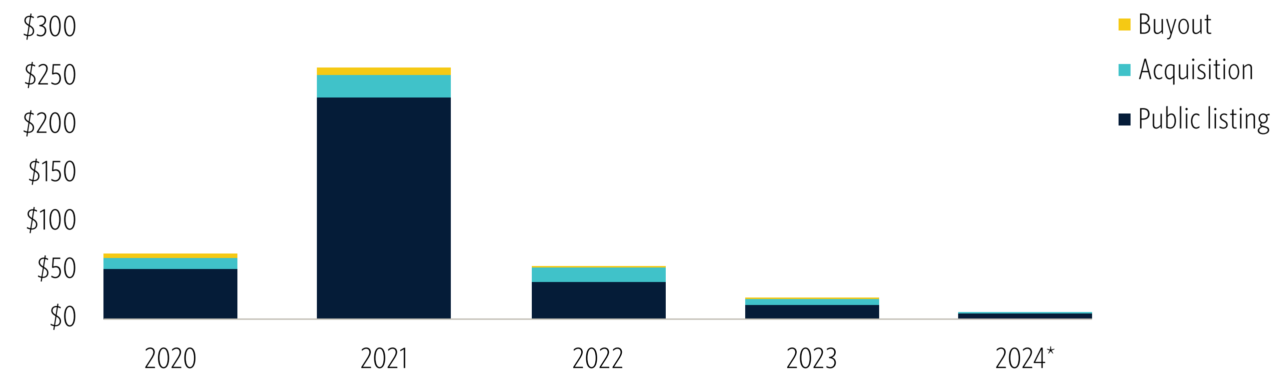
Q1 extended the theme of hardware acceleration being the primary outlet for exits in the current market environment. After MosaicML's outlier acquisition last year and Arm's IPO, Astera Labs reached public markets with an outstanding revenue multiple that set a high-water mark for an AI semiconductor valuation premium. Momentum from datacenter financing and the company's partnerships with Intel and NVIDIA suggest that revenue growth acceleration is likely in the short run. Not all AI companies will see this demand based on revenue forecasts and strategic alignment with market leaders. Thus far in Q2, NVIDIA announced an acquisition of Run:ai in the hardware acceleration as well, demonstrating the urgency of hardware challenges that we have documented. Some GenAI companies faced small acquisitions due to limited momentum, including BirchAI, Claypot AI, and Inflection AI. We expect the theme of semiconductors producing larger outcomes than software to continue with a potential listing for Cerebras. Foundation model startup acquisitions seem likely given the dominance of leading research labs yet can still achieve high deal values, as evidenced by MosaicML's $1.3 billion valuation last year.

AI & ML VC deal activity



Source: PitchBook • Geography: Global • *As of March 31, 2024

AI & ML VC exit value ($B) by type



Source: PitchBook • Geography: Global • *As of March 31, 2024

Key AI & ML early-stage VC deals by deal value in Q1 2024*

Company	Close date	Segment	Category	Deal value ($M)	Post-money valuation ($M)	Lead investor(s)	Valuation step-up (post to pre)
MiniMax AI	March 4	Horizontal platforms	AI core	$600.0	$2,500.0	Alibaba Group	N/A
Mistral AI	February 26	Horizontal platforms	AI core	$431.3	$2,000.0	Andreessen Horowitz, General Catalyst, Lightspeed Venture Partners	6.1x
xAI	January 11	Horizontal platforms	AI core	$134.7	N/A	IPO Club, Bossanova Investimentos	N/A
Rebellions	January 29	Semiconductors	Processor design	$124.7	$664.9	KT Cloud	N/A
Magic	February 12	Vertical applications	IT	$117.3	$500.0	Nat Friedman	3.2x
Together	March 13	Horizontal platforms	AI core	$106.0	$1,250.0	Salesforce Ventures	2.0x
Sierra	January 26	Horizontal platforms	Natural language technology	$85.0	N/A	Sequoia Capital	N/A
ElevenLabs	January 22	Vertical applications	Consumer	$80.0	$1,000.0	Andreessen Horowitz, Daniel Gross, Nat Friedman	9.2x
Perplexity	March 6	Vertical applications	Consumer	$73.6	$1,000.0	Daniel Gross, NVIDIA	1.8x
Hippocratic AI	March 18	Vertical applications	Healthcare	$55.0	$500.0	General Catalyst, Premji Invest	2.0x

Source: PitchBook • Geography: Global • *As of March 31, 2024

Key AI & ML late-stage VC deals by deal value in Q1 2024*

Company	Close date	Segment	Category	Deal value ($M)	Post-money valuation ($M)	Lead investor(s)	Valuation step-up (post to pre)
Anthropic	March 27	Horizontal platforms	AI core	$4,000.0	$18,400.0	Amazon.com, 7GC & Co and SquareOne Capital	N/A
Anthropic	January 30	Horizontal platforms	AI core	$750.0	N/A	Menlo Ventures	N/A
Figure AI	February 27	Autonomous machines	Intelligent robotics	$675.0	$2,675.0	Bezos Expeditions, Microsoft, NVIDIA	N/A
Lambda	February 16	Semiconductors	Processor design	$320.0	$1,520.0	US Innovative Technology Fund	7.1x
Glean	February 27	Horizontal platforms	Natural language technology	$200.0	$2,200.0	Kleiner Perkins, Lightspeed Venture Partners	2.0x
AI2 Incubator	March 8	Horizontal platforms	AI core	$200.0	N/A	N/A	N/A
BioAge	February 1	Horizontal platforms	AI core	$194.3	$394.3	Sofinnova Investments	0.8x
Celestial AI	March 26	Semiconductors	Processor design	$175.0	$1,175.0	US Innovative Technology Fund	2.9x
Abridge	March 29	Vertical applications	Healthcare	$150.0	$850.0	Lightspeed Venture Partners, Redpoint Ventures	3.4x
Observe	March 27	Horizontal platforms	AI core	$125.0	N/A	Sutter Hill Ventures	N/A

Source: PitchBook • Geography: Global • *As of March 31, 2024

SELECT COMPANY HIGHLIGHTS: DATABRICKS

databricks

Overview

Founded in 2013, Databricks offers a data science platform that includes AI-as-a-service functionality with a suite of data science tools for data engineering, data warehousing, and ML algorithms. The company grew out of the open-source Apache Spark data science community and created an extensible product, the Unified Data Analytics Platform, that can ingest data from enterprise silos and prepare it for cluster-based computing. Once an effective open-source product was in place, the company moved to a closed-source model and rapidly increased revenue beginning in 2016.

Databricks now offers a product suite on top of Apache Spark that includes an AI platform called Lakehouse AI, which is optimized for GenAI with data storage, a model training pipeline, and model-serving and monitoring; a data lake, which integrates unstructured data in a central database for analytics; and data security. The company has focused on the GenAI opportunity, training a custom LLM called DBRX that can run more efficiently than GPT-3.5 and comparable open-source models. Databricks recently acquired Einblick for data analysis using GenAI and Lilac for GenAI data preparation. In Q1, the company invested in Mistral AI and Adaptive AI, contributing to the company's vision of fine-tuned open-source models for its customers.

Key company information

Founded
2013

Employees
8,101

Total raised
$4.2B

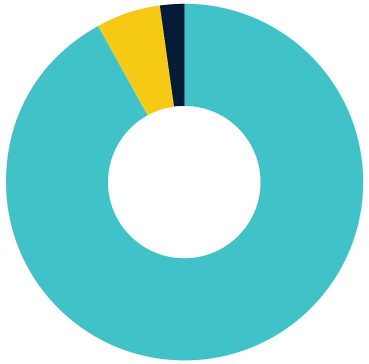
Last financing valuation
$43.2B

Last financing
Raised $684.6M in a Series I

December 2023
Leader in Gartner Magic Quadrant for Cloud Database Management Systems

Lead investor(s)
NVIDIA, T. Rowe Price, Counterpoint Global, Franklin Templeton Investments, Andreessen Horowitz, NEA

Exit Predictor



IPO: 92% probability **M&A:** 6% probability **No exit:** 2% probability

Success: 98% probability

Note: Probability data is based on PitchBook VC Exit Predictor methodology.

Leadership

Databricks' management has high technical expertise capable of generating product-led growth. The company was founded by seven early contributors to Apache Spark, and all the co-founders remain at the company. CEO and co-founder Ali Ghodsi earned a Ph.D. in distributed computing and was vice president of engineering before being promoted to CEO at the start of the company's growth phase in 2016. The acquisition of MosaicML brought in the Vice President of Generative AI, Naveen Rao, who has credibility in the open-source AI community. The board features co-founders and VC investors, including Andreessen Horowitz co-founder Ben Horowitz, yet still lacks the public-company leadership we believe is necessary to go public.

Competitors

Databricks stands out in the AI & ML market by supporting customized AI model training using open-source models atop its data lake, functionality that distinguishes it from legacy vendors such as SAP, Microsoft, and AWS and allows it to be more AI oriented than next-generation data-warehouse vendor Snowflake. Because of its ability to support batch processing for ML analytics and other high-value workloads, Databricks is capturing market share from incumbents such as Alteryx, IBM, Oracle, and SAS. Databricks runs on Microsoft Azure and AWS, although those hyperscalers would likely prefer to natively support their GenAI workflows. The company's Unity Catalog product gives it market credit for data governance—a critical problem for data scientists new to AI.

Outlook

Databricks has achieved the necessary scale and growth to realize high performance in public markets. The company neared $2.0 billion in 2023 with 50% revenue growth.[9] The company will need to defend itself against ML-optimized challengers that can carry out more efficient streaming data analysis and in-memory analytics within its database. Furthermore, it will benefit from analytics built on its database becoming essential to high-value industries, including IT and industrial. The company remains innovative and active in future-proofing its business, leading us to believe that, in the long run, Databricks will be valued more highly than relational database incumbents based on the growth opportunities of data lake architecture for streaming data.

9: "Databricks," Sacra, n.d., accessed May 10, 2024.

SELECT COMPANY HIGHLIGHTS: DATABRICKS

Financing history

	Series A	Series B	Series C	Series D	Series E	Series F
Date	September 24, 2013	June 30, 2014	December 15, 2016	September 25, 2018	January 11, 2019	October 22, 2019
Total raised	$14.0M	$33.4M	$60.0M	$140.0M	$250.0M	$400.0M
Pre-money valuation	$30.0M	$220.0M	$460.0M	$800.0M	$2.5B	$5.8B
Lead investor	Andreessen Horowitz	NEA	NEA	Andreessen Horowitz	Andreessen Horowitz	Andreessen Horowitz

	Series G	Series H	Series I
Date	February 9, 2021	August 31, 2021	November 13, 2023
Total raised	$1.0B	$1.6B	$684.6M
Pre-money valuation	$27.0B	$36.4B	$42.5B
Lead investor / Lead investor(s)	Franklin Templeton Investments	Counterpoint Global	NVIDIA, T. Rowe Price

About PitchBook Industry and Technology Research

Independent, objective, and timely market intel

As the private markets continue to grow in complexity and competition, it's essential for investors to understand the industries, sectors, and companies driving the asset class.

Our Industry and Technology Research provides detailed analysis of nascent tech sectors so you can better navigate the changing markets you operate in—and pursue new opportunities with confidence.

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