



EMERGING TECH RESEARCH

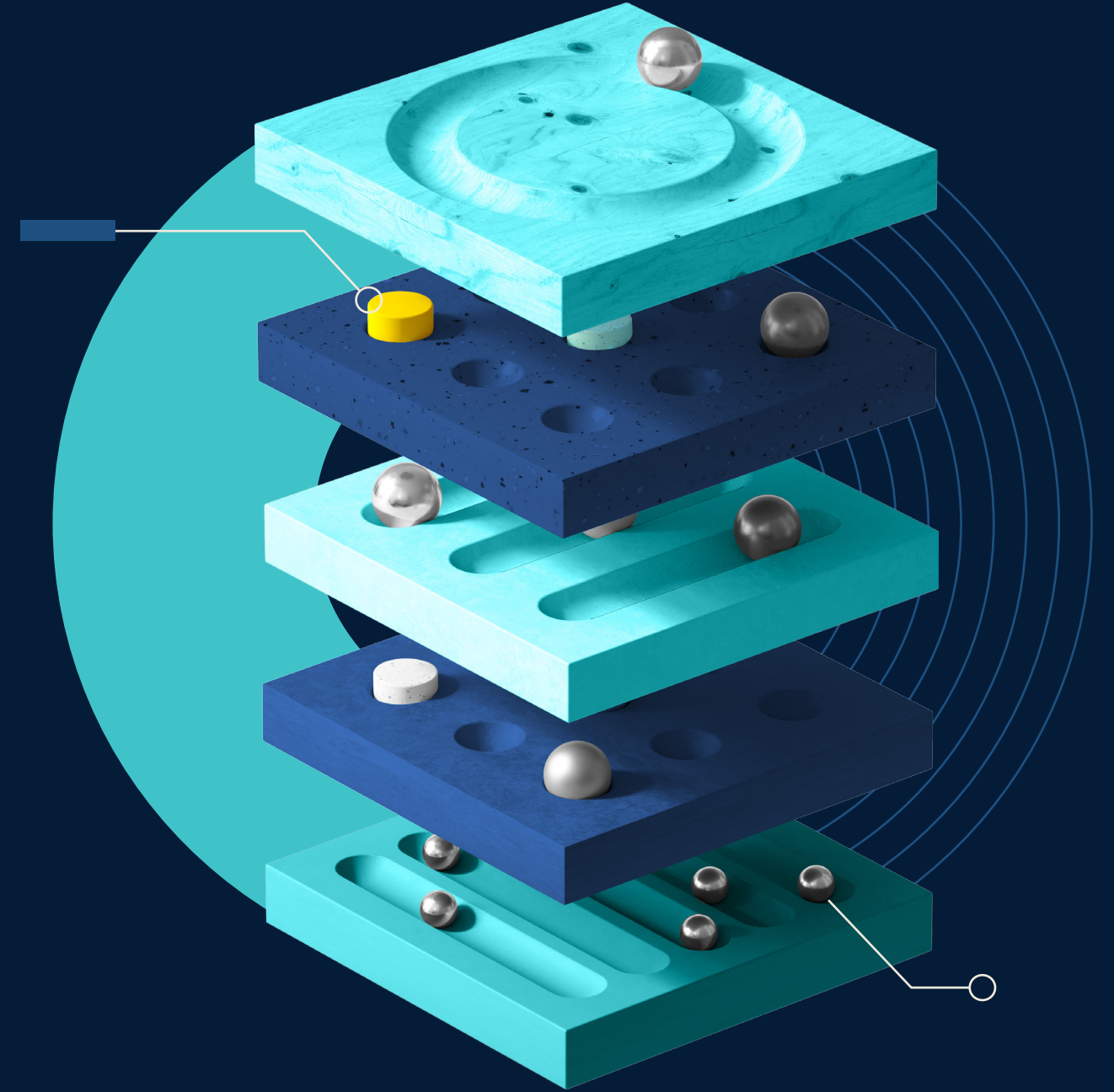
AI & ML VC Trends

VC activity across the AI & ML ecosystem

Q4
2024

REPORT PREVIEW

The full report is available through the PitchBook Platform.





Contents

AI & ML landscape	3
AI & ML VC ecosystem market map	4
VC activity	5
AI & ML VC deal summary	15

Institutional Research Group

Analysis



Derek Hernandez Senior Analyst, Emerging Technology
derek.hernandez@pitchbook.com
pbinstitutionalresearch@pitchbook.com

Data

Nick Zambrano Data Analyst

Publishing

Report designed by **Megan Woodard, Julia Midkiff, and Drew Sanders**

Published on February 27, 2025

For previous updates as well as our complete AI & ML research, please see the designated [analyst workspace](#) on the PitchBook Platform.





AI & ML landscape

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

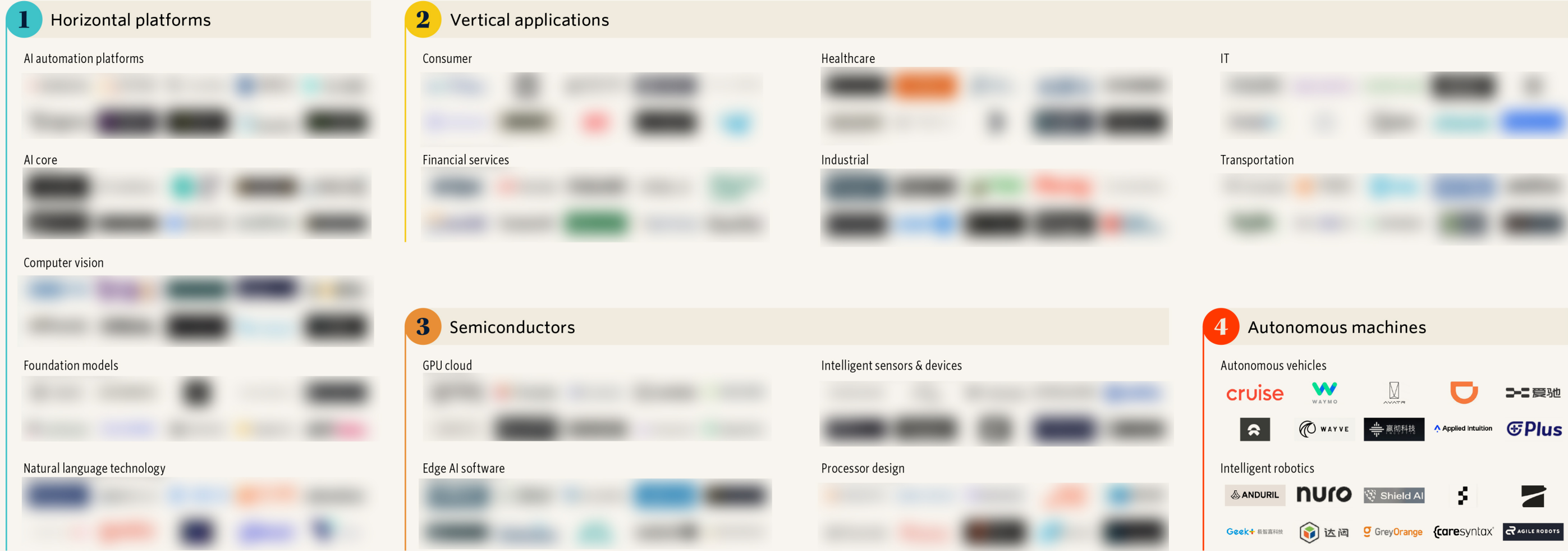




AI & ML VC ecosystem market map

This market map is an overview of venture-backed or growth-stage companies that have received venture capital or other notable private investments as of Q4 2024.

[Click to view the latest interactive map on the PitchBook Platform.](#)



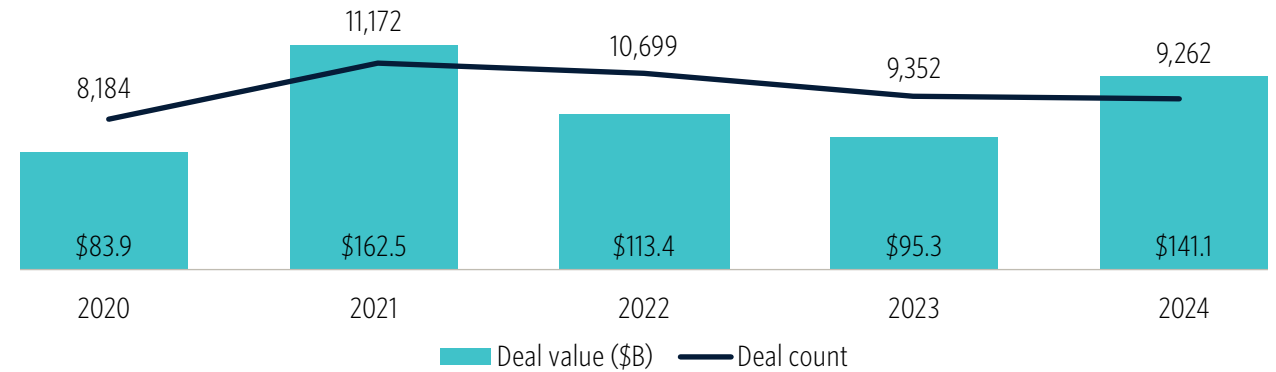


VC activity

Before Chinese AI startup DeepSeek rocked global technology stocks in January 2025, there was a massive and unprecedented wave of investment across the AI & machine learning (ML) sector in Q4 2024. The quarter saw an astonishing \$58.7 billion in capital raised, topping the prior high of \$45.9 billion in 2021 by nearly 28%. This was driven largely by megadeals across the familiar big hitters of Databricks (\$10 billion), OpenAI (\$6.6 billion), xAI (\$6 billion), Waymo (\$5.6 billion), and Anthropic (\$4 billion). Together, these top five deals raised \$32.2 billion, a whopping 54.8% of the total for the quarter. Q4 propelled 2024 to \$141.1 billion raised, up 48.1% YoY, while annual deal count was almost flat at 9,262, down just 1% from 2023.

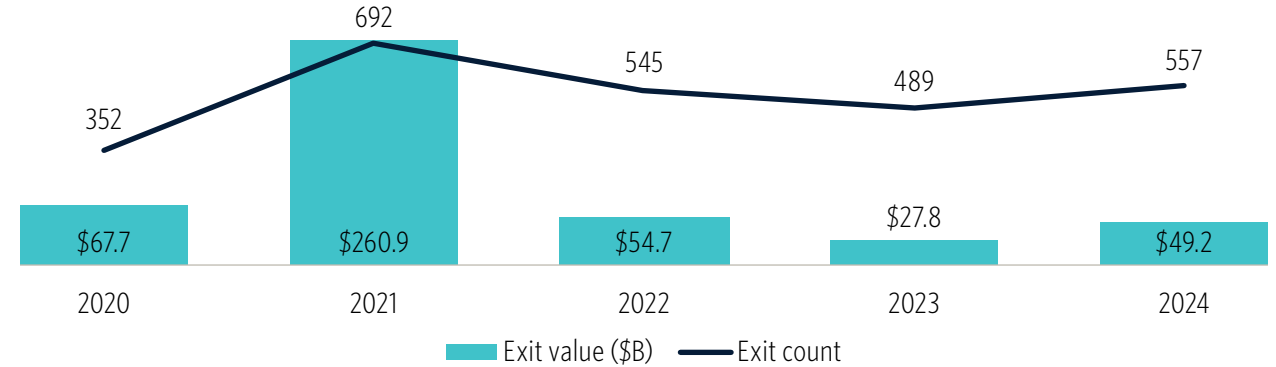
Given the DeepSeek-shaped elephant in the room, we expect some moderation of investment in 2025, specifically compared with the exuberance of Q4. There are many drivers for continued major investment across the AI & ML space. Most importantly, we remain in the early stages of market and product development. Many observers have highlighted the Jevons paradox, where DeepSeek-R1's demonstration of cheaper and more efficient AI deployment is likely to translate to even higher utilization of the technology overall. This is particularly applicable in the edge AI and Internet of Things categories, potentially realizing many of the aspirations that have long percolated there. This may also expand the addressable market for AI even faster than has long been expected given presumed technology, energy, and communications limits.

AI & ML VC deal activity



Source: PitchBook • Geography: Global • As of December 31, 2024

AI & ML VC exit activity



Source: PitchBook • Geography: Global • As of December 31, 2024



VC ACTIVITY

Since the sharp market acknowledgment of DeepSeek's capabilities in January, many credible questions have been raised about the company's claims, especially regarding DeepSeek's total cost and apparent use of existing foundational models, which will likely be more difficult for upstart companies going forward. Prominent AI & ML VC investors have expressed this and have voiced continued confidence in the startup investment landscape. The disruption may have longer-term effects on the ongoing tension between open and closed models. Leadership at OpenAI recently expressed being open to developing an open-source strategy, though this continues to be a lower-priority initiative. Additionally, long-term capital expenditure on semiconductors may be lowered with these demonstrated opportunities for efficiencies. We expect these decreases to be on the margins, as foundational models continue to require massive compute for ongoing inference.

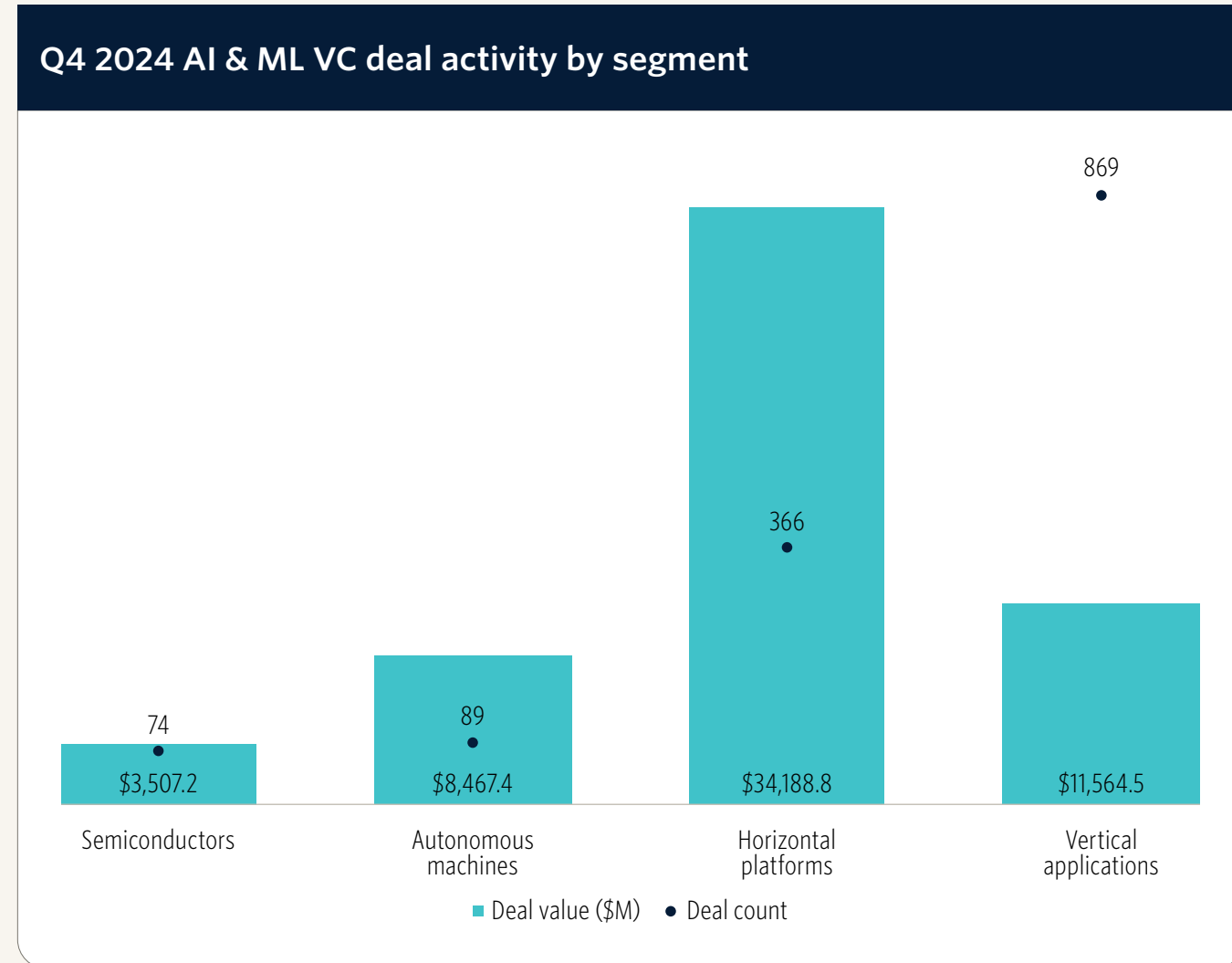
In Q4 2024, most new investment, especially the five megadeals noted earlier, was concentrated in the horizontal platforms segment with \$34.2 billion invested across 366 deals. Vertical applications flipped the script with a much higher deal count of 869, which together raised \$11.6 billion during the quarter. Autonomous machines and semiconductors rounded out the quarter with \$8.5 billion across 89 deals and \$3.5 billion across 74 deals, respectively. These patterns were reflected across the full year, with horizontal platforms capturing a large majority of deal value and vertical applications taking a majority of deal count.

The deal count mix of Q4 backing by stage remained consistent compared with all of 2024, with little shift in early-stage versus late-stage investing in the quarter. Pre-seed/seed represented 33.2% of all Q4 deals, followed by early-stage VC with 36.9%, late-stage VC with 24.8%, and venture growth with 5.2%. While Q4 deal value was roughly flat QoQ in pre-seed/seed and early-stage VC, both late-stage VC and venture growth saw explosive QoQ growth of 152.5% and 279.3%, respectively. Given the megadeals announced in the quarter, this distribution was no great surprise.

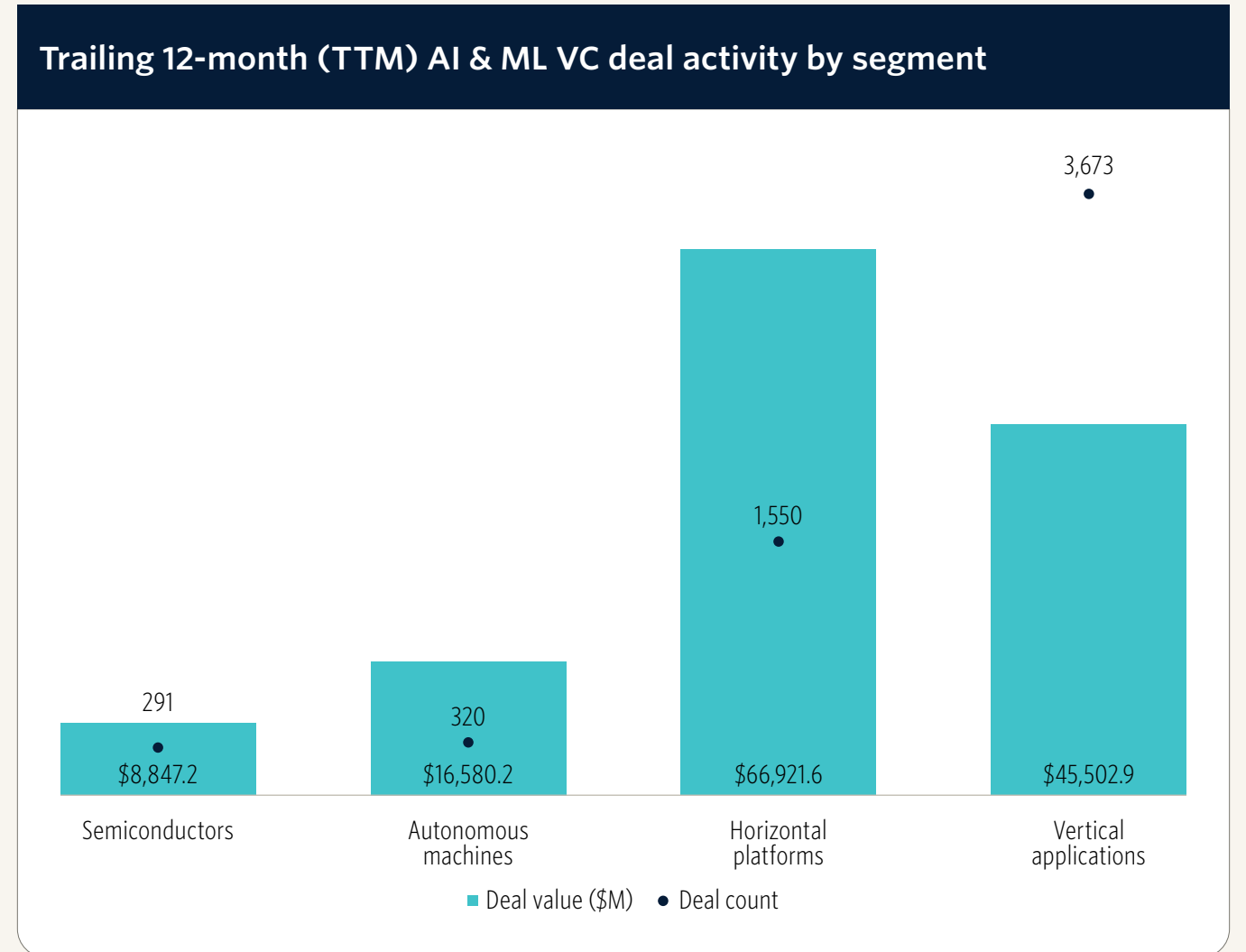
In Q4, AI & ML VC exits rose to 162, up from 133 in Q3. Exit value disclosures continued to be limited, with 30 of 162 exits disclosing their valuations. The number of disclosed exit values has continued to be below the norm from prior years. For reference, in 2024, 111 out of 557 exits in AI & ML had disclosed values. The high-water mark for disclosures was set in 2021, when 276 of 692 exits had disclosed values. Nonetheless, 2024 represented a decent bounce in exit counts YoY, up 13.9% to 557 total exits, and a strong bounce in disclosed exit value YoY, up 77% to \$49.2 billion in total exit value.



VC ACTIVITY



Source: PitchBook • Geography: Global • As of December 31, 2024



Source: PitchBook • Geography: Global • As of December 31, 2024



VC ACTIVITY

Key AI & ML early-stage VC deals in Q4 2024

Company	Close date	Segment	Category	Deal value (\$M)	Post-money valuation (\$M)	Lead investor(s)	Valuation step-up
GreenScale	November 12	Horizontal platforms	AI automation platforms	\$1,297.3	N/A	N/A	N/A
poolside	October 2	Horizontal platforms	AI core	\$500.0	\$3,000.0	Bain Capital Ventures, Rashmi Gopinath	4.8x
Physical Intelligence	October 22	Autonomous machines	Intelligent robotics	\$400.0	\$2,400.0	Jeffrey Bezos, Lux Capital, OpenAI, Thrive Capital	4.3x
Liquid AI	December 13	Horizontal platforms	AI core	\$250.0	N/A	Advanced Micro Devices	N/A
Sierra	November 1	Horizontal platforms	Natural language technology	\$175.0	\$4,500.0	Greenoaks Capital Partners	4.0x
Patho Care	December 31	Vertical applications	Healthcare	\$150.2	N/A	N/A	N/A
Aethir	November 1	Semiconductors	GPU cloud	\$115.2	N/A	N/A	N/A
Aiwyn	December 19	Vertical applications	Financial services	\$113.0	\$434.0	Bessemer Venture Partners, Kohlberg Kravis Roberts	2.5x
Auger	October 8	Vertical applications	Industrial	\$100.0	N/A	N/A	N/A
Tessl	November 4	Horizontal platforms	AI core	\$100.0	\$500.0	Index Ventures	N/A

Source: PitchBook • Geography: Global • As of December 31, 2024



VC ACTIVITY

Key AI & ML late-stage VC deals in Q4 2024

Company	Close date	Segment	Category	Deal value (\$M)	Post-money valuation (\$M)	Lead investor(s)	Valuation step-up
Databricks	December 17	Horizontal platforms	AI automation platforms	\$10,000.0	\$62,000.0	Andreessen Horowitz, DST Global, GIC Private, Insight Partners, MGX, Thrive Capital, WCM Investment Management	1.2x
OpenAI	October 2	Horizontal platforms	AI core	\$6,600.0	\$157,000.0	Thrive Capital	N/A
xAI	November 20	Horizontal platforms	Natural language technology	\$6,000.0	\$50,000.0	MGX	1.8x
Waymo	October 25	Autonomous machines	Autonomous vehicles	\$5,600.0	\$45,000.0	Alphabet	N/A
Anthropic	November 22	Horizontal platforms	AI core	\$4,000.0	N/A	N/A	N/A
Tenstorrent	December 2	Semiconductors	Processor design	\$700.0	\$2,600.0	AFW Partners, Samsung Catalyst Fund, Samsung Securities, Samsung Venture Investment	N/A
Crusoe	December 12	Semiconductors	GPU cloud	\$685.7	\$2,800.0	Founders Fund	N/A
Perplexity	December 1	Vertical applications	Consumer	\$500.0	\$9,000.0	IVP	N/A
Insider	November 1	Vertical applications	IT	\$500.0	N/A	General Atlantic	N/A
Zhipu AI	December 17	Horizontal platforms	Natural language technology	\$413.4	N/A	N/A	N/A

Source: PitchBook • Geography: Global • As of December 31, 2024



VC ACTIVITY

Key AI & ML VC exits in Q4 2024

Company	Close date	Segment	Category	Exit value (\$M)	Post-money valuation (\$M)	Exit type	Acquirer/index
Horizon Robotics	October 24	Semiconductors	Processor design	\$5,992.6	\$6,688.2	IPO	Hong Kong Stock Exchange
Pony.ai	November 27	Autonomous machines	Autonomous vehicles	\$4,276.5	\$4,536.5	IPO	Nasdaq
WeRide	October 25	Autonomous machines	Autonomous vehicles	\$4,134.6	\$4,254.6	IPO	Nasdaq
Featurespace	December 19	Vertical applications	Financial services	\$925.0	\$925.0	M&A	Visa
Run:ai	December 30	Horizontal platforms	AI core	\$700.0	\$700.0	M&A	NVIDIA
Zoomin	November 18	Vertical applications	IT	\$344.0	\$344.0	M&A	Salesforce
phData	December 13	Horizontal platforms	AI automation platforms	\$320.0	\$320.0	Buyout/LBO	Gryphon Investors
Synspective	December 19	Vertical applications	Industrial	\$274.0	\$341.2	IPO	Tokyo Stock Exchange
Damon Motorcycles	November 14	Semiconductors	Intelligent sensors & devices	\$220.1	\$220.1	M&A	XTI Aerospace
Element451	November 27	Vertical applications	IT	\$220.0	\$220.0	M&A	PSG

Source: PitchBook • Geography: Global • As of December 31, 2024



AI & ML VC deal summary

	Quarterly activity						TTM activity	
	Q4 2023	Q1 2024	Q2 2024	Q3 2024	Q4 2024	Q1 2023 to Q4 2023	Q1 2024 to Q4 2024	
Deal count	2,339	2,529	2,291	2,240	2,202	9,352	9,262	
QoQ change	4.7%	8.1%	-9.4%	-2.2%	-1.7%	N/A	-1.0%	
Share of total VC	22.7%	23.3%	23.7%	25.3%	26.5%	21.5%	24.6%	
Deal value (\$B)	\$24.3	\$24.4	\$30.9	\$27.0	\$58.7	\$95.3	\$141.1	
QoQ change	38.8%	0.6%	26.6%	-12.5%	117.1%	N/A	48.1%	
Share of total VC	29.3%	28.9%	33.6%	31.3%	49.8%	27.2%	37.1%	
Exit count	121	133	129	133	162	489	557	
Public listings	13	12	15	11	22	48	60	
Acquisitions	88	91	96	106	115	360	408	
Buyouts	20	30	18	16	25	81	89	

Source: PitchBook • Geography: Global • As of December 31, 2024

About PitchBook Industry and Technology Research

Independent, data-driven, and timely market intel

As the private markets ecosystem continues to grow in complexity and competition, investors need tools and data that can give them an edge.

Our Industry and Technology Research provides detailed analysis of established industries and nascent tech sectors from the perspective of private market dealmaking, helping you stay current on market trends and providing the insights you need to pursue new opportunities with confidence.

©2025 by PitchBook Data, Inc. All rights reserved. No part of this publication may be reproduced in any form or by any means—graphic, electronic, or mechanical, including photocopying, recording, taping, and information storage and retrieval systems—without the express written permission of PitchBook Data, Inc. Contents are based on information from sources believed to be reliable, but accuracy and completeness cannot be guaranteed. Nothing herein should be construed as any past, current or future recommendation to buy or sell any security or an offer to sell, or a solicitation of an offer to buy any security. This material does not purport to contain all of the information that a prospective investor may wish to consider and is not to be relied upon as such or used in substitution for the exercise of independent judgment.

PitchBook Data, Inc.

Nizar Tarhuni Executive Vice President of Research and Market Intelligence

Paul Condra Global Head of Private Markets Research

James Ulan Director of Research, Emerging Technology

Industry and Technology Research team

PitchBook's Industry and Technology Research team provides comprehensive updates on over 20 different coverage areas.

[Visit our website](#) for the full list.

Eric Bellomo
eric.bellomo@pitchbook.com

Jim Corridore
jim.corridore@pitchbook.com

Aaron DeGagne
aaron.degagne@pitchbook.com

Alex Frederick
alex.frederick@pitchbook.com

Jonathan Geurkink
jonathan.geurkink@pitchbook.com

Kazi Helal
kazi.helal@pitchbook.com

Derek Hernandez
derek.hernandez@pitchbook.com

Ali Javaheri
ali.javaheri@pitchbook.com

Robert Le
robert.le@pitchbook.com

John MacDonagh
john.macdonagh@pitchbook.com

Rudy Yang
rudy.yang@pitchbook.com