

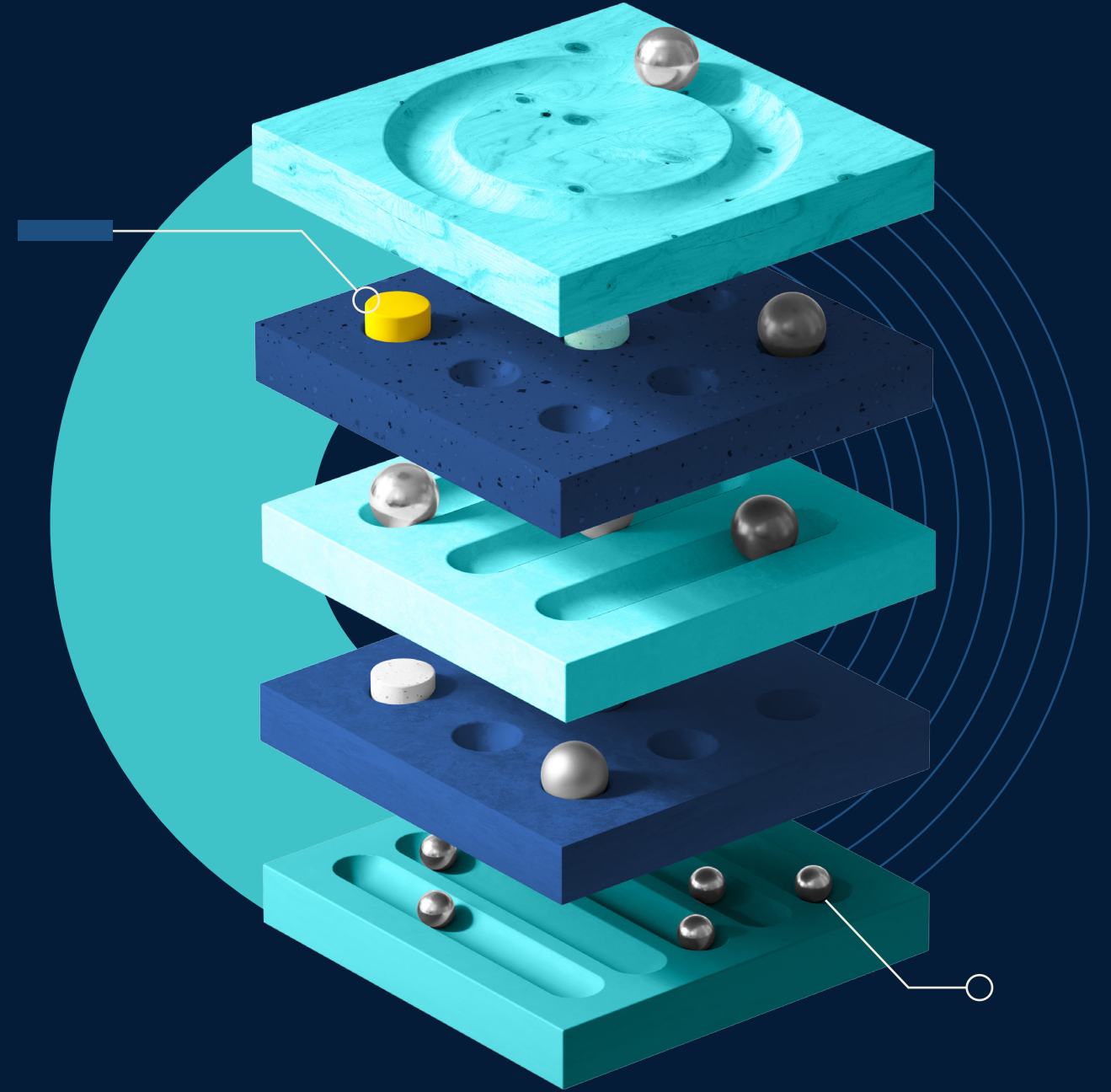


EMERGING TECH RESEARCH

# AI & ML VC Trends

VC activity across the AI & ML ecosystem

Q4  
2024





# 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

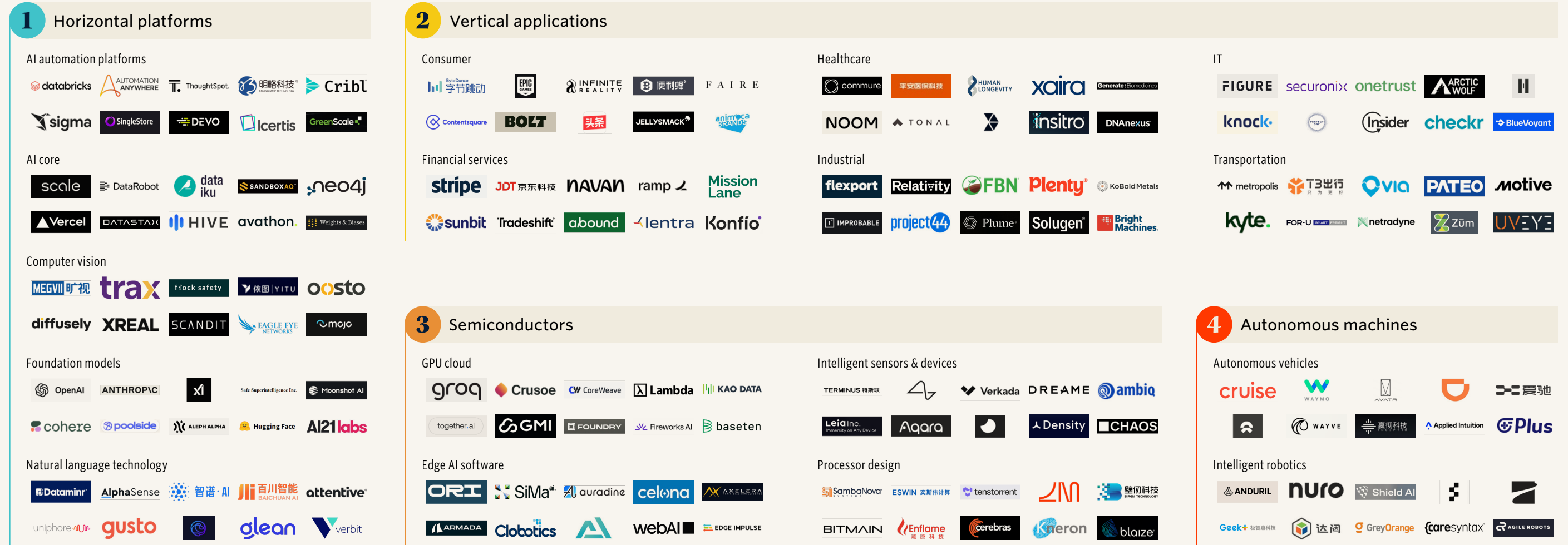




# AI & ML VC ecosystem market map

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.](#)



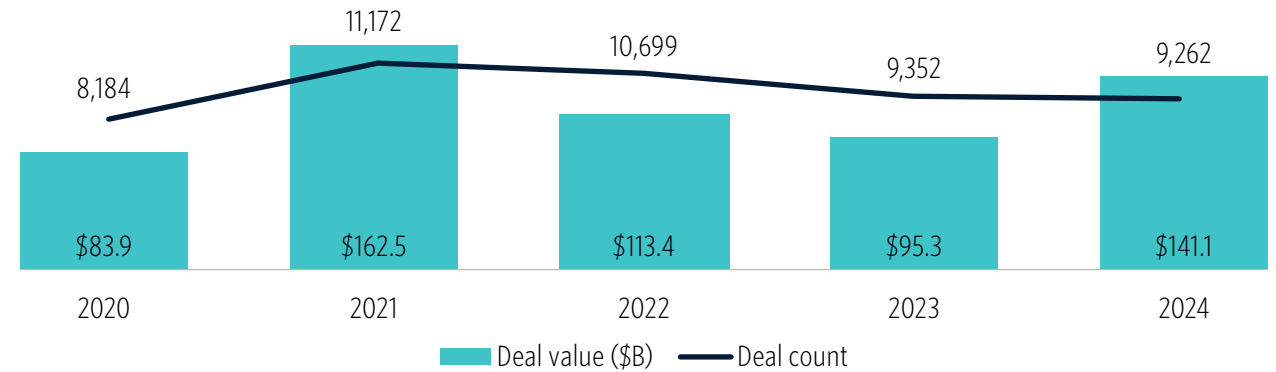


# VC activity

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.

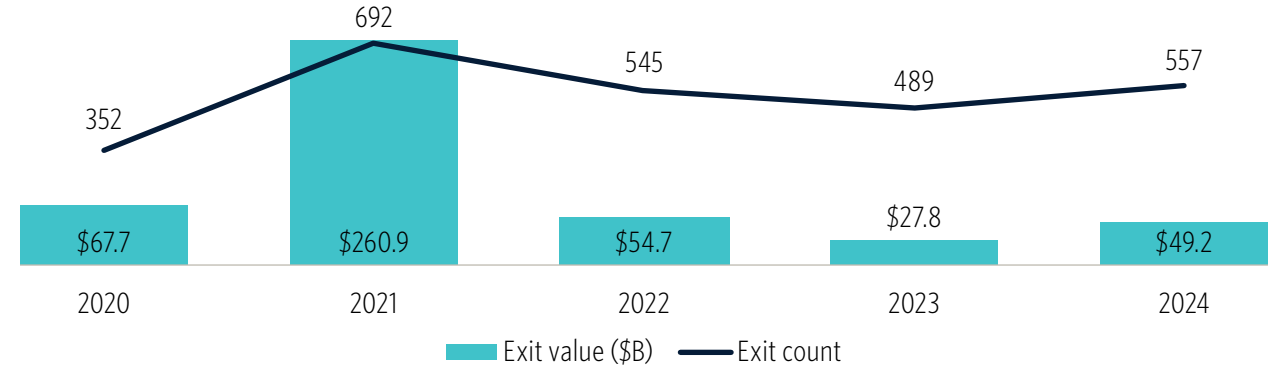
Given the DeepSeek-shaped elephant in the room, we expect some moderation of investment in 2025, specifically compared with the exuberance of Q4. There are many drivers for continued major investment across the AI & ML space. Most importantly, we remain in the early stages of market and product development. 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.

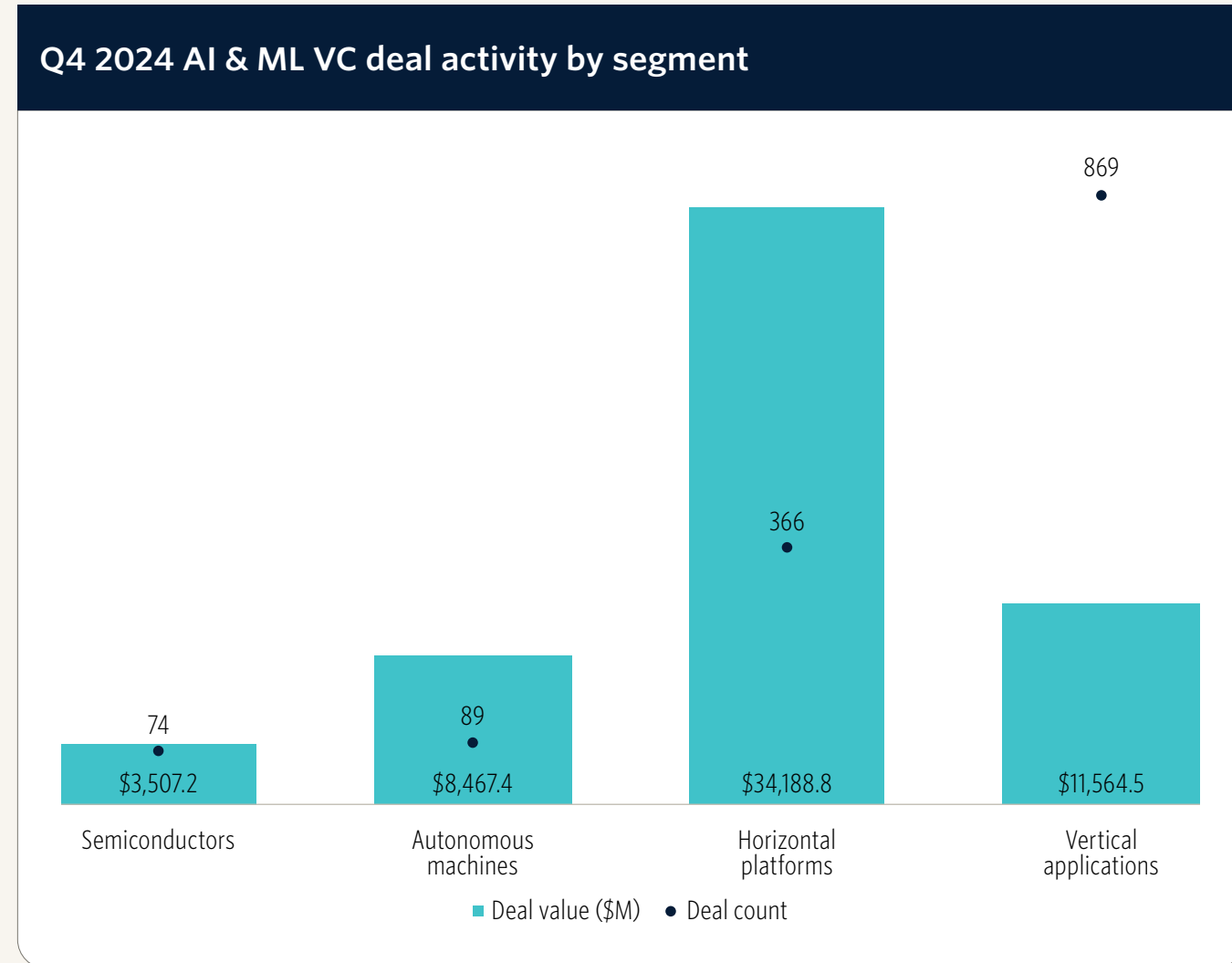
In Q4 2024, most new investment, especially the five megadeals noted earlier, was concentrated in the horizontal platforms segment with \$34.2 billion invested across 366 deals. Vertical applications flipped the script with a much higher deal count of 869, which together raised \$11.6 billion during 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.

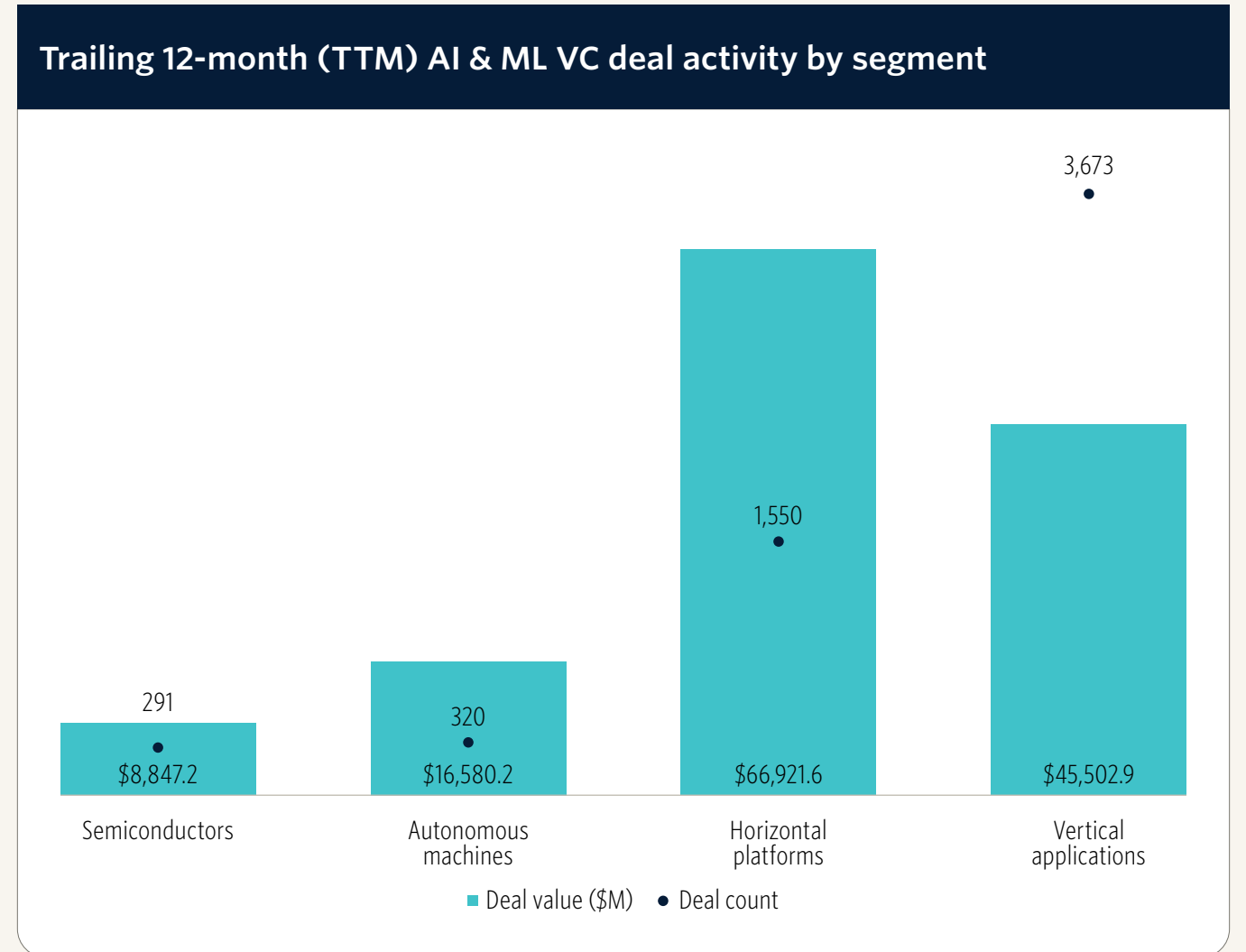
In Q4, AI & ML VC exits rose to 162, up from 133 in Q3. Exit value disclosures continued to be limited, with 30 of 162 exits disclosing their valuations. The number of disclosed exit values has continued to be below the norm from prior years. For reference, in 2024, 111 out of 557 exits in AI & ML had 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

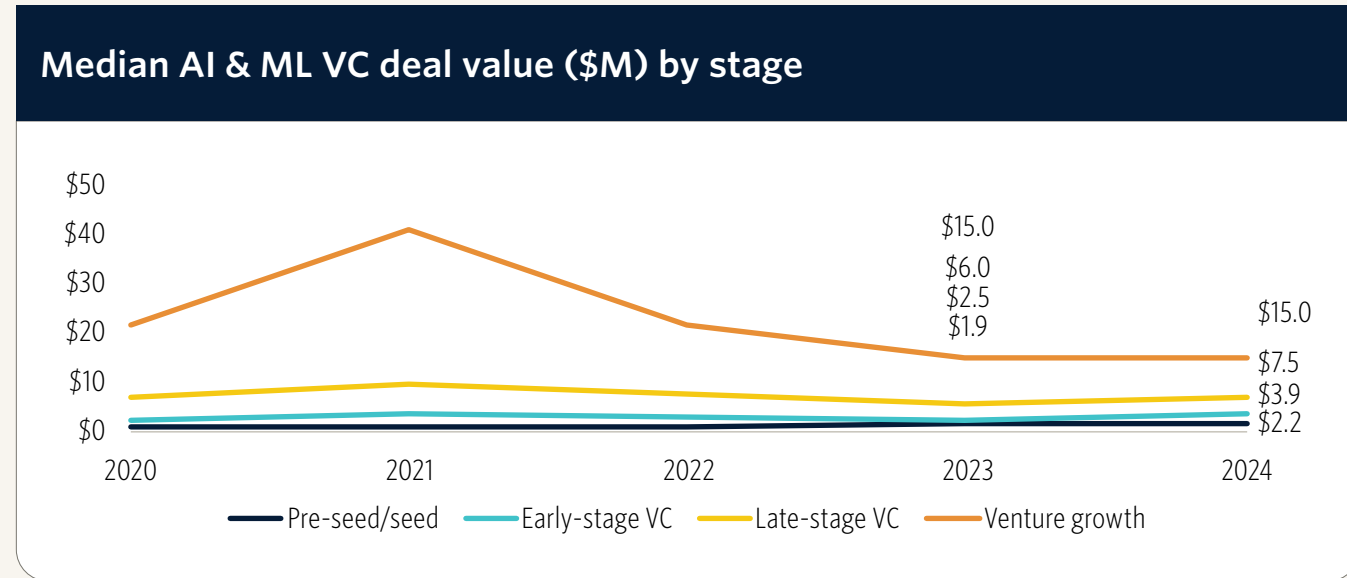


Source: PitchBook • Geography: Global • As of December 31, 2024

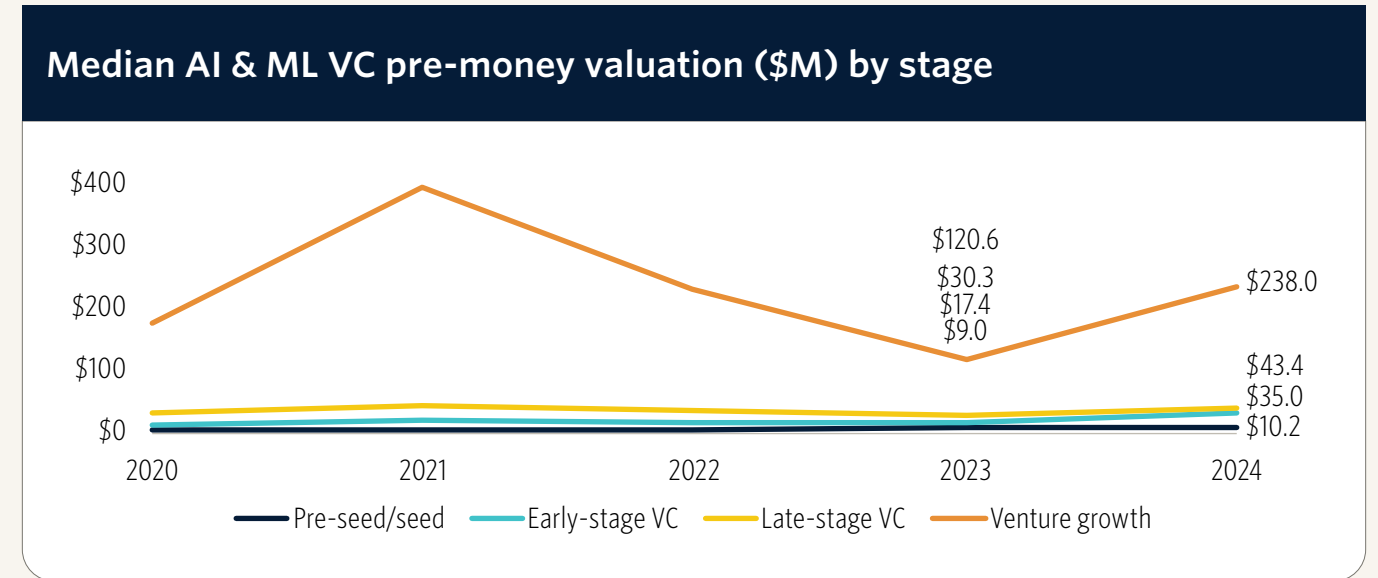




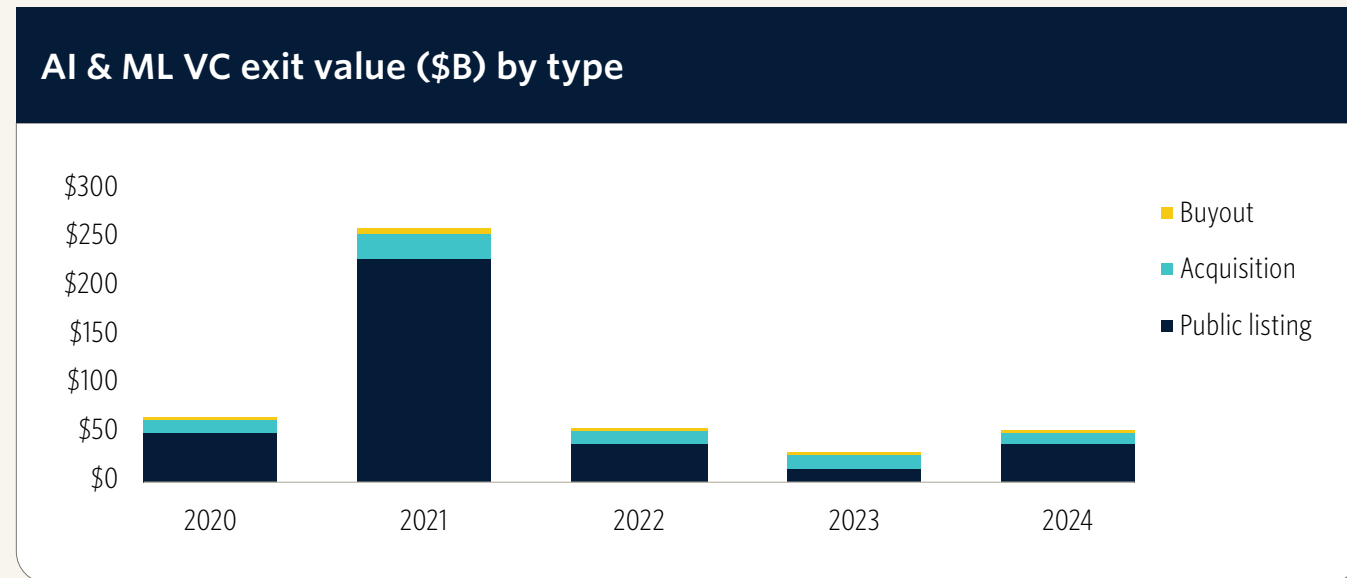
## VC ACTIVITY



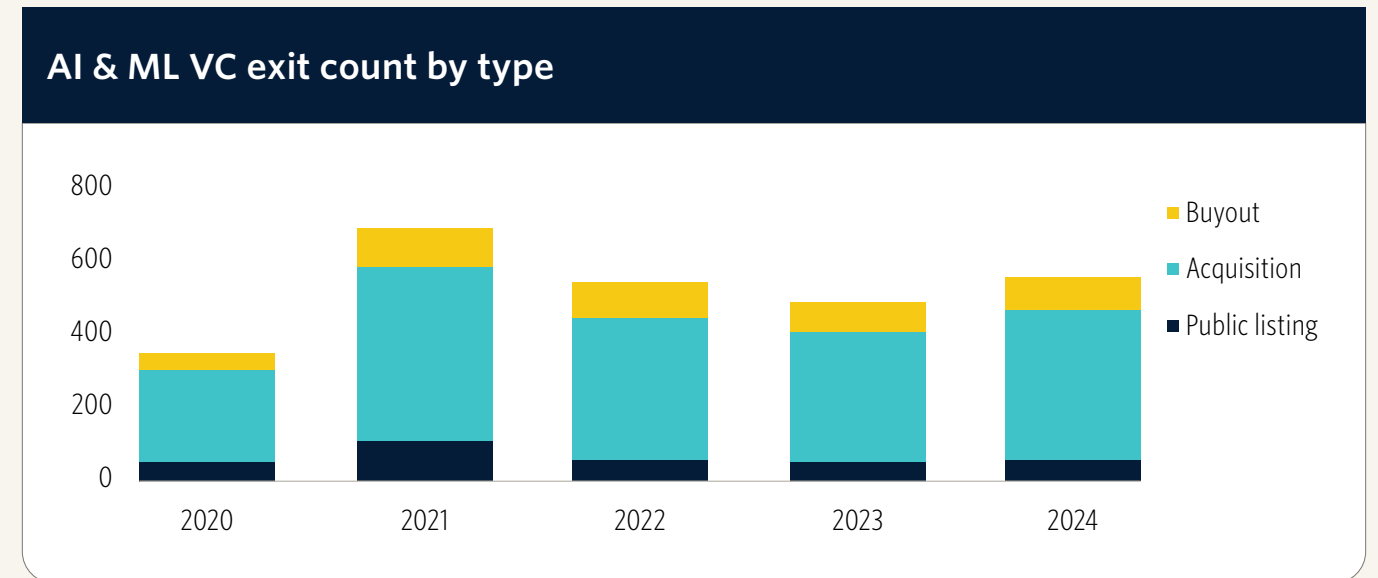
Source: PitchBook • Geography: Global • As of December 31, 2024



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



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



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





## VC ACTIVITY

### AI & ML heatmap by segment

| Segment               | TTM total VC deal value (\$M) | TTM total VC deal count | YoY VC deal value growth | YoY VC deal count growth |
|-----------------------|-------------------------------|-------------------------|--------------------------|--------------------------|
| Semiconductors        | \$8,847.2                     | 291                     | 38.0%                    | -20.7%                   |
| Autonomous machines   | \$16,580.2                    | 320                     | 111.8%                   | -14.0%                   |
| Horizontal platforms  | \$66,921.6                    | 1,550                   | 115.3%                   | -6.2%                    |
| Vertical applications | \$45,502.9                    | 3,673                   | -5.3%                    | -13.2%                   |

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 |
|--------------------|-------------|-----------------------|-----------------------------|------------------|----------------------------|--|-------------------|
| <b>Databricks</b>  | 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              |
| <b>OpenAI</b>      | October 2   | Horizontal platforms  | AI core                     | \$6,600.0        | \$157,000.0                | Thrive Capital   | N/A               |
| <b>xAI</b>         | November 20 | Horizontal platforms  | Natural language technology | \$6,000.0        | \$50,000.0                 | MGX  | 1.8x              |
| <b>Waymo</b>       | October 25  | Autonomous machines   | Autonomous vehicles         | \$5,600.0        | \$45,000.0                 | Alphabet   | N/A               |
| <b>Anthropic</b>   | November 22 | Horizontal platforms  | AI core                     | \$4,000.0        | N/A                        | N/A  | N/A               |
| <b>Tenstorrent</b> | December 2  | Semiconductors        | Processor design            | \$700.0          | \$2,600.0                  | AFW Partners, Samsung Catalyst Fund, Samsung Securities, Samsung Venture Investment                            | N/A               |
| <b>Crusoe</b>      | December 12 | Semiconductors        | GPU cloud                   | \$685.7          | \$2,800.0                  | Founders Fund  | N/A               |
| <b>Perplexity</b>  | December 1  | Vertical applications | Consumer                    | \$500.0          | \$9,000.0                  | IVP  | N/A               |
| <b>Insider</b>     | November 1  | Vertical applications | IT                          | \$500.0          | N/A                        | General Atlantic   | N/A               |
| <b>Zhipu AI</b>    | 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



## VC ACTIVITY

### Top strategic acquirers of AI & ML companies since 2020

| Acquirer                        | Deal count | Investor type |
|---------------------------------|------------|---------------|
| Accenture                       | 17         | Corporation   |
| Apple                           | 13         | Corporation   |
| Snowflake                       | 11         | Corporation   |
| Cisco Systems                   | 10         | Corporation   |
| International Business Machines | 10         | Corporation   |
| NVIDIA                          | 9          | Corporation   |
| Meta Platforms                  | 9          | Corporation   |
| Salesforce                      | 8          | Corporation   |
| ServiceNow                      | 7          | Corporation   |
| Intel                           | 7          | Corporation   |
| Snap                            | 7          | Corporation   |
| Microsoft                       | 7          | Corporation   |

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

### Top VC investors in AI & ML companies since 2020

| Company                       | Total deal count | Pre-seed/seed | Early-stage VC | Late-stage VC | Venture growth | Investor type |
|-------------------------------|------------------|---------------|----------------|---------------|----------------|---------------|
| Gaingels                      | 575              | 207           | 160            | 170           | 38             | VC            |
| Alumni Ventures               | 475              | 207           | 132            | 116           | 20             | VC            |
| Antler                        | 463              | 405           | 53             | 5             | 0              | VC            |
| Sequoia Capital               | 395              | 139           | 127            | 93            | 36             | VC            |
| Andreessen Horowitz           | 322              | 93            | 122            | 75            | 32             | VC            |
| Soma Capital                  | 300              | 151           | 132            | 16            | 1              | VC            |
| Pioneer Fund                  | 271              | 202           | 57             | 11            | 1              | VC            |
| Enterprise Ireland            | 245              | 94            | 83             | 60            | 8              | VC            |
| Right Side Capital Management | 239              | 89            | 120            | 30            | 0              | VC            |
| SOSV                          | 233              | 121           | 43             | 57            | 12             | VC            |

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



## VC ACTIVITY

### Top VC-backed AI & ML companies by total VC raised to date

| Company      | VC (\$M) raised to date | Segment               | Category                    | IPO probability | M&A probability | No exit probability |
|--------------|-------------------------|-----------------------|-----------------------------|-----------------|-----------------|---------------------|
| OpenAI       | \$19,911.5              | Horizontal platforms  | AI core                     | 89%             | 9%              | 2%                  |
| Databricks   | \$14,181.9              | Horizontal platforms  | AI automation platforms     | 97%             | 1%              | 2%                  |
| Anthropic    | \$12,754.0              | Horizontal platforms  | AI core                     | 58%             | 40%             | 2%                  |
| xAI          | \$12,134.7              | Horizontal platforms  | Natural language technology | 76%             | 9%              | 15%                 |
| Waymo        | \$11,100.0              | Autonomous machines   | Autonomous vehicles         | 75%             | 23%             | 2%                  |
| Stripe       | \$8,735.0               | Vertical applications | Financial services          | 95%             | 3%              | 2%                  |
| Epic Games   | \$7,675.0               | Vertical applications | Consumer                    | 79%             | 13%             | 8%                  |
| Anduril      | \$4,340.1               | Autonomous machines   | Intelligent robotics        | 97%             | 1%              | 2%                  |
| Uber Freight | \$2,733.5               | Vertical applications | Industrial                  | 12%             | 86%             | 2%                  |
| Flexport     | \$2,236.9               | Vertical applications | Industrial                  | 64%             | 34%             | 2%                  |

Source: PitchBook • Geography: Global • As of December 31, 2024  
 Note: Probability data is based on [PitchBook VC Exit Predictor methodology](#).



# 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        | <b>2,339</b>       | <b>2,529</b>  | <b>2,291</b>  | <b>2,240</b>  | <b>2,202</b>  | <b>9,352</b>       | <b>9,262</b>       |  |
| 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)  | <b>\$24.3</b>      | <b>\$24.4</b> | <b>\$30.9</b> | <b>\$27.0</b> | <b>\$58.7</b> | <b>\$95.3</b>      | <b>\$141.1</b>     |  |
| 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        | <b>121</b>         | <b>133</b>    | <b>129</b>    | <b>133</b>    | <b>162</b>    | <b>489</b>         | <b>557</b>         |  |
| 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](mailto:eric.bellomo@pitchbook.com)

**Jim Corridore**  
[jim.corridore@pitchbook.com](mailto:jim.corridore@pitchbook.com)

**Aaron DeGagne**  
[aaron.degagne@pitchbook.com](mailto:aaron.degagne@pitchbook.com)

**Alex Frederick**  
[alex.frederick@pitchbook.com](mailto:alex.frederick@pitchbook.com)

**Jonathan Geurkink**  
[jonathan.geurkink@pitchbook.com](mailto:jonathan.geurkink@pitchbook.com)

**Kazi Helal**  
[kazi.helal@pitchbook.com](mailto:kazi.helal@pitchbook.com)

**Derek Hernandez**  
[derek.hernandez@pitchbook.com](mailto:derek.hernandez@pitchbook.com)

**Ali Javaheri**  
[ali.javaheri@pitchbook.com](mailto:ali.javaheri@pitchbook.com)

**Robert Le**  
[robert.le@pitchbook.com](mailto:robert.le@pitchbook.com)

**John MacDonagh**  
[john.macdonagh@pitchbook.com](mailto:john.macdonagh@pitchbook.com)

**Rudy Yang**  
[rudy.yang@pitchbook.com](mailto:rudy.yang@pitchbook.com)