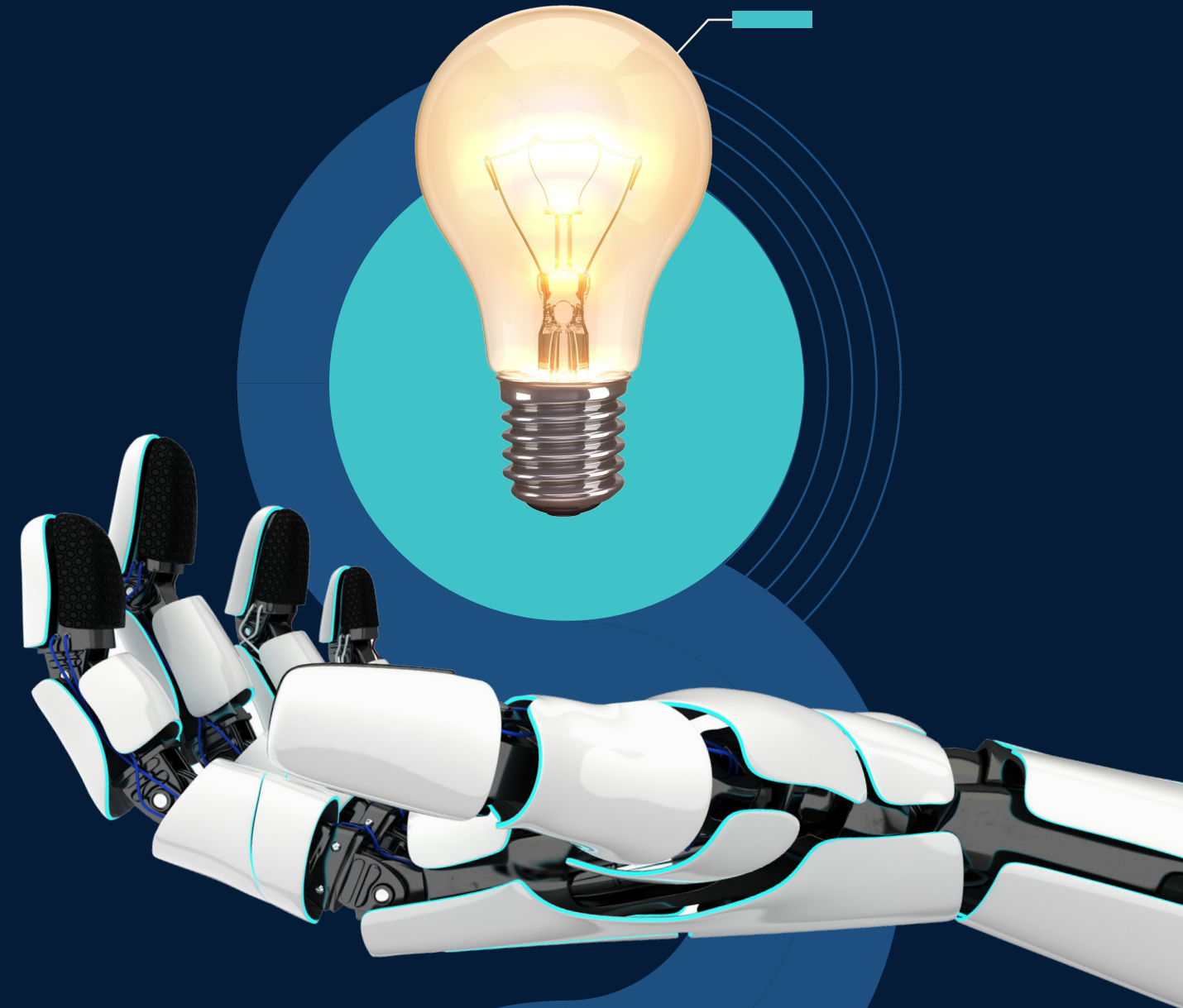# PitchBook

EMERGING TECH RESEARCH

AI & ML Report

VC trends and innovation spotlights

Q3 2024

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

Contents

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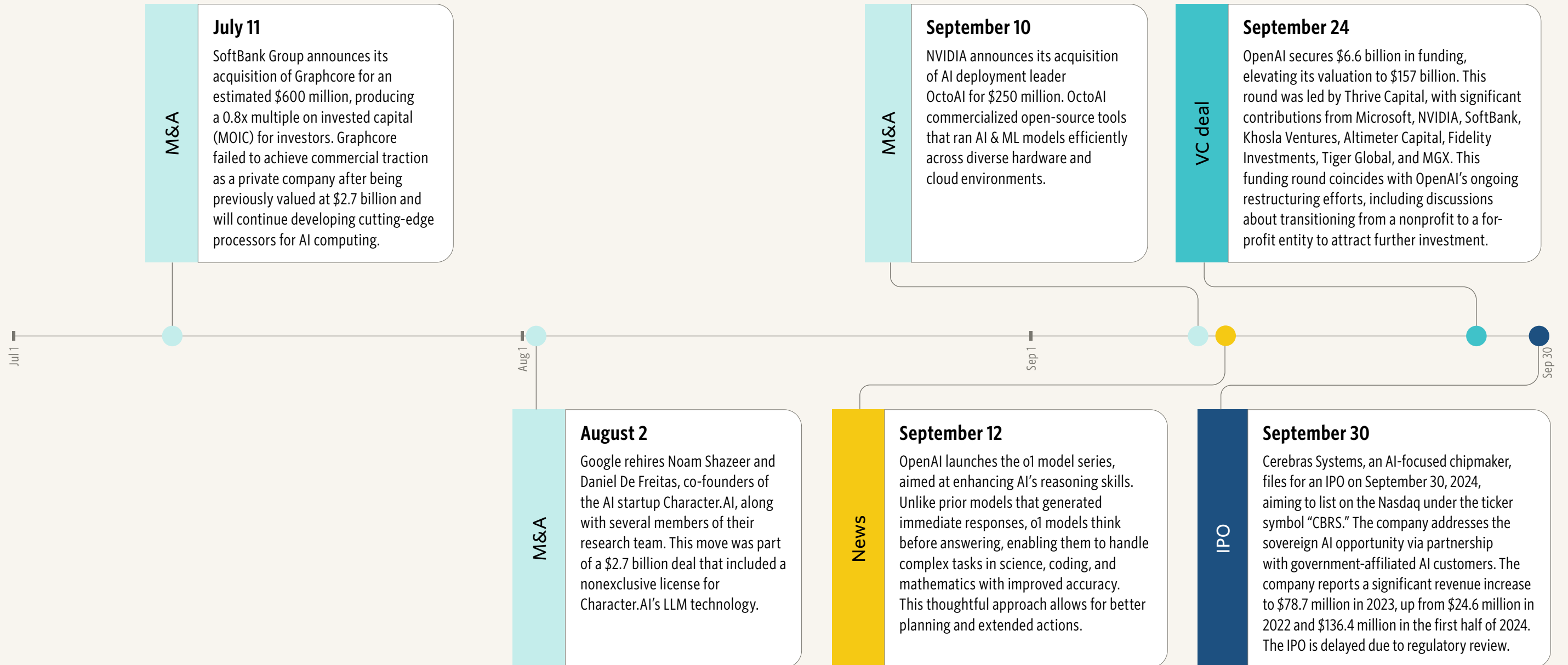
For previous updates as well as our complete AI & ML research, please see the designated analyst workspace on the PitchBook Platform.

Q3 2024 timeline

M&A

July 11

SoftBank Group announces its acquisition of Graphcore for an estimated $600 million, producing a 0.8x multiple on invested capital (MOIC) for investors. Graphcore failed to achieve commercial traction as a private company after being previously valued at $2.7 billion and will continue developing cutting-edge processors for AI computing.

M&A

September 10

NVIDIA announces its acquisition of AI deployment leader OctoAI for $250 million. OctoAI commercialized open-source tools that ran AI & ML models efficiently across diverse hardware and cloud environments.

VC deal

September 24

OpenAI secures $6.6 billion in funding, elevating its valuation to $157 billion. This round was led by Thrive Capital, with significant contributions from Microsoft, NVIDIA, SoftBank, Khosla Ventures, Altimeter Capital, Fidelity Investments, Tiger Global, and MGX. This funding round coincides with OpenAI's ongoing restructuring efforts, including discussions about transitioning from a nonprofit to a for-profit entity to attract further investment.

Jul 1   Aug 1   Sep 1   Sep 30

M&A

August 2

Google rehires Noam Shazeer and Daniel De Freitas, co-founders of the AI startup Character.AI, along with several members of their research team. This move was part of a $2.7 billion deal that included a nonexclusive license for Character.AI's LLM technology.

News

September 12

OpenAI launches the o1 model series, aimed at enhancing AI's reasoning skills. Unlike prior models that generated immediate responses, o1 models think before answering, enabling them to handle complex tasks in science, coding, and mathematics with improved accuracy. This thoughtful approach allows for better planning and extended actions.

IPO

September 30

Cerebras Systems, an AI-focused chipmaker, files for an IPO on September 30, 2024, aiming to list on the Nasdaq under the ticker symbol "CBRS." The company addresses the sovereign AI opportunity via partnership with government-affiliated AI customers. The company reports a significant revenue increase to $78.7 million in 2023, up from $24.6 million in 2022 and $136.4 million in the first half of 2024. The IPO is delayed due to regulatory review.

AI & ML VC deal summary

	Quarterly activity					Trailing 12-month activity	
	Q3 2023	Q4 2023	Q1 2024	Q2 2024	Q3 2024	Q4 2022 to Q3 2023	Q4 2023 to Q3 2024
Deal count	2,119	2,181	2,253	2,150	2,017	8,882	8,601
QoQ change	-3.6%	2.9%	3.3%	-4.6%	-6.2%	-17.8%	-3.2%
Share of total VC	21.6%	21.6%	22.4%	22.8%	24.4%	19.8%	22.7%
Deal value ($B)	$17.3	$22.6	$25.8	$31.8	$31.1	$87.0	$111.3
QoQ change	-9.3%	30.9%	14.0%	23.2%	-2.3%	-35.0%	27.9%
Share of total VC	21.2%	27.7%	30.8%	34.2%	35.6%	24.2%	32.2%
Exit count	127	116	124	124	124	473	488
Public listings	18	13	12	15	11	53	51
Acquisitions	90	83	85	92	97	340	357
Buyouts	19	20	27	17	16	80	80

Source: PitchBook • Geography: Global • As of September 30, 2024

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 Q2 2024. Click to view the latest interactive map on the PitchBook Platform.

1 Horizontal platforms

AI automation platforms
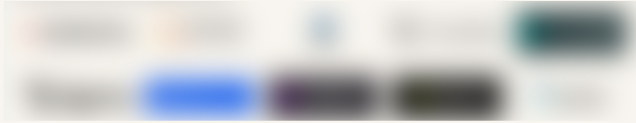
AI core

Computer vision
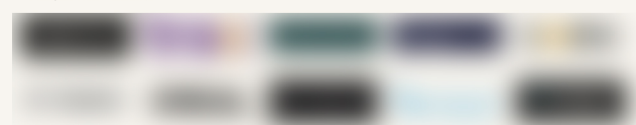
Foundation models

Natural language technology

2 Vertical applications

Consumer

Financial services

Healthcare

Industrial

IT

Transportation

3 Semiconductors

Graphics processing unit (GPU) cloud

Edge AI software

Intelligent sensors & devices
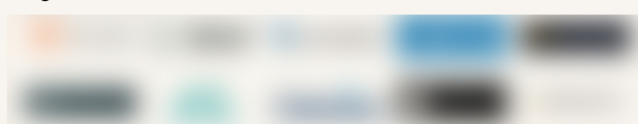
Processor design
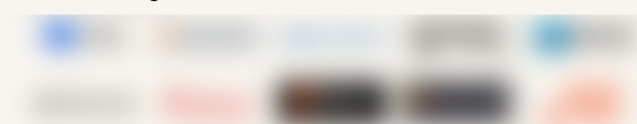
4 Autonomous machines

Autonomous vehicles

WAYMO · 爱驰 · WeRide 文远知行 · WAYVE · momenta · PONY.ai · 阿维塔 AVATR · 赢彻科技 · Applied Intuition

Intelligent robotics

ANDURIL · nuro · Shield AI · Skydio · 达阔 · Geek+ · Caresyntax · AGILE ROBOTS · GreyOrange

VC activity

AI VC activity has been driven by an infrastructure arms race between foundation model startups. OpenAI's $6.6 billion Series F drove Q3 VC funding nearly to Q2's total, reaching an overall sum of $31.1 billion. This deal matched the size of xAI's megadeal and demonstrated OpenAI's ambitions to own its infrastructure. The horizontal platforms segment exceeded vertical applications in VC funding as a result, continuing a reversal of historical trends. Venture growth and early-stage VC funding both exceeded late-stage funding, showing a squeeze of companies around Series B and Series C rounds. VC investors report that valuation multiples are coming back in line for startups pursuing generative AI given a reckoning in growth expectations for companies developing new technology. Even so, outstanding growth and market leadership can achieve outstanding revenue multiples. Foundation model startups Sakana AI, Safe Superintelligence, and World Labs have shown that leading AI researchers can earn $1 billion valuations with limited commercial proof. These early rounds suggest that continued multibillion-dollar VC rounds remain likely going forward to match investor appetite for potential tech giants.
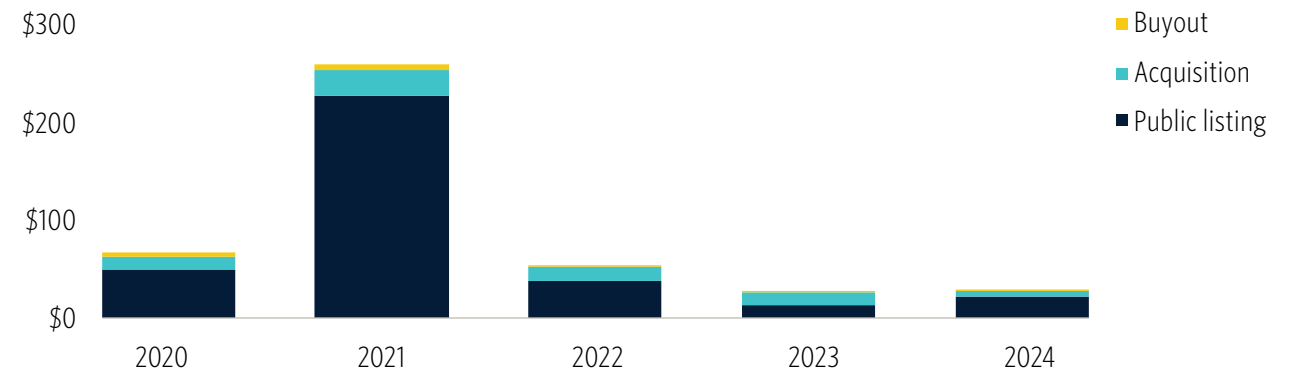
M&A awaits a change in regulatory regime as the IPO pipeline continues to build. We did not track a closed acquisition for the cloud giants, although talent acquisitions continued with leadership of Character.AI and Covariant joining Google and Amazon, respectively. NVIDIA continued its acquisition streak by acquiring AI orchestration leader OctoAI for at least $250 million, resulting in a 1.9x MOIC for investors. Cerebras' IPO filing was delayed by regulatory review, though the company's attempt to go public demonstrated the urgency of semiconductor companies to take advantage of the heightened public valuations of AI hardware companies. The largest IPO came from China-based AI chipmaker Black Sesame Technologies, which reached a $2 billion valuation. A business-friendly regulatory environment may encourage unicorn companies to take advantage of all-time high valuations.

AI & ML VC deal activity

Deal count: 7,943 (2020); 10,703 (2021); 10,198 (2022); 8,826 (2023); 6,420 (2024)
Deal value ($B): $81.4 (2020); $154.7 (2021); $109.6 (2022); $90.3 (2023); $88.7 (2024)

Legend: Deal value ($B) — Deal count
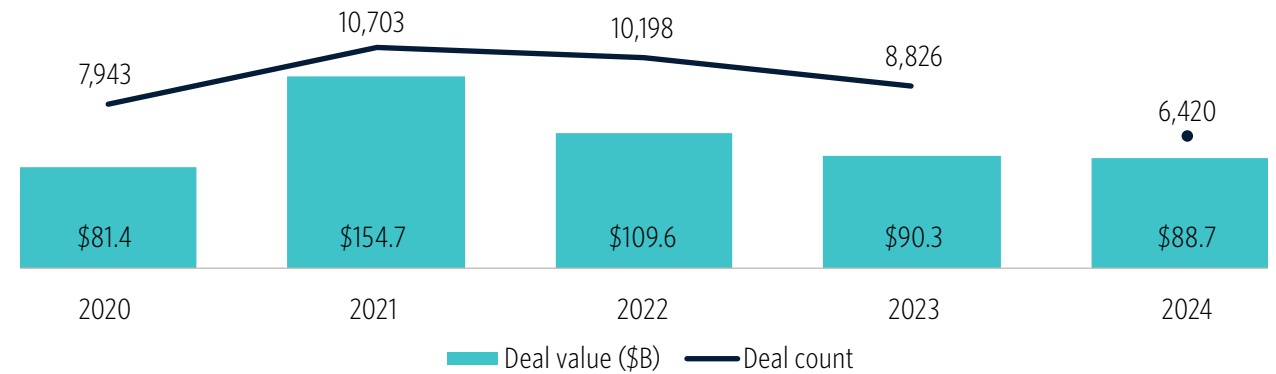
Source: PitchBook • Geography: Global • As of September 30, 2024

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

Legend: Buyout, Acquisition, Public listing

Source: PitchBook • Geography: Global • As of September 30, 2024

Key AI & ML early-stage VC deals by deal value in Q3 2024

Company	Close date	Category	Deal value ($M)	Post-money valuation ($M)	Lead investor(s)	Valuation step-up (post to pre)
Safe Superintelligence	September 4	Foundation models	$1,000.0	$5,000.0	Andreessen Horowitz, Sequoia Capital, DST Global	N/A
Baichuan AI	July 24	Conversational AI	$688.5	$2,754.0	Tencent Investment, Xiaomi Technology, Alibaba Group	N/A
Moonshot AI	August 5	Natural language generation	$300.0	$43,300.0	Alibaba Group, Tencent Holdings, Gaorong Capital	1.2x
World Labs	September 13	Foundation models	$230.0	$1,000.0	Andreessen Horowitz, New Enterprise Associates, Radical Ventures	3.0x
Sakana AI	September 17	Model development tools	$214.0	$1,500.0	Khosla Ventures, Lux Capital, New Enterprise Associates	8.4x
Rebellions	July 22	Processor design	$133.6	N/A	KT Cloud	N/A
Hebbia	July 8	Natural language understanding	$130.0	$710.0	Andreessen Horowitz, GV, Index Ventures	4.6x
Superluminal Medicines	September 4	Drug discovery	$120.0	$198.0	RA Capital Management	1.9x
DevRev	July 25	Software development tools	$100.8	$1,600.8	Khosla Ventures, Mayfield Fund, Param Hansa Values	1.0x
Protect AI	August 1	Information security	$80.8	$500.0	Evolution Equity Partners	4.2x

Source: PitchBook • Geography: Global • As of September 30, 2024

Key AI & ML late-stage VC deals by deal value in Q3 2024

Company	Close date	Category	Deal value ($M)	Post-money valuation ($M)	Lead investor(s)	Valuation step-up (post to pre)
Lambda	August 1	GPU cloud	$800.0	N/A	Bossa Invest	N/A
Groq	August 5	Processor design	$640.0	$2,800.0	BlackRock, Cisco Investments, Samsung Catalyst Fund, Type One Ventures	1.9x
Cohere	July 22	Foundation models	$500.0	$5,500.0	Public Sector Pension Investment Board	2.5x
Helsing	July 11	Information security	$483.7	$5,320.6	Elad Gil, General Catalyst	2.6x
Infinite Reality	July 9	E-commerce recommendation	$350.0	$5,100.0	Concord Music, Liberty Media, MGM Studios	N/A
Magic	August 29	Software development tools	$320.7	$1,581.7	Eric Schmidt	2.4x
OpenAI	September 24	Foundation models	$6,600.0	$157,000.0	Thrive Capital	N/A
Anduril Industries	August 7	Drones	$1,500.0	$14,000.0	Founders Fund, Sands Capital	1.3x
Tenstorrent	July 16	Processor design	$281.1	$2,281.1	Samsung Catalyst Fund, Samsung Venture Investment	N/A
Glean	September 10	Natural language understanding	$260.0	$4,600.0	Altimeter Capital Management, DST Global	1.9x

Source: PitchBook • Geography: Global • As of September 30, 2024

ANTHROP\C

Overview

Anthropic has continued its rollout of new models and features in the Claude 3.5 model family to further solidify its position as a prominent foundation model provider. Claude 3.5 Haiku was released in October, providing the latest version of Anthropic's fastest model. The model provides faster speeds at a lower price than Sonnet, although it sacrifices overall output quality. Notably, the model surpasses Anthropic's largest and most expensive model, Claude 3 Opus, on several benchmarks, including coding and quantitative reasoning.[9] This performance increase caused Anthropic to increase the price of using Claude 3.5 Haiku by 4x compared with its predecessor. At $2.00 per 1 million tokens, the model is now several times more expensive than competitor models of similar performance. OpenAI's GPT 4o-mini and Meta's Llama 3.1 70B score similarly in quality and speed, although they cost $0.30 and $0.80 per 1 million tokens, respectively. The third model in the 3.5 family, Opus, may be released before the end of the year.

Also in October, Anthropic announced a first-of-its-kind feature for its new Claude 3.5 Sonnet model. The new "computer use" feature allows the model to move a user's cursor, click, and type text to complete tasks independently. The tool makes Claude the first frontier model to offer computer use, and Anthropic announced that several corporations, including DoorDash and Asana, have already begun to utilize the feature.[10] The update also improved 3.5 Sonnet's

9: "Claude 3.5 Haiku: Quality, Performance & Price Analysis," Artificial Analysis, n.d., accessed November 11, 2024.
10: "Introducing Computer Use, a New Claude 3.5 Sonnet, and Claude 3.5 Haiku," Anthropic, October 22, 2024.

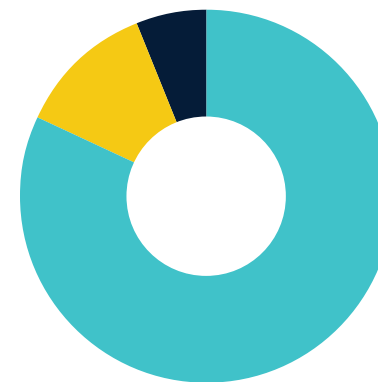## Key company information

Founded
2021

Employees
500

Total raised
$8.8B

Last financing valuation
$19.4B

Last financing
Raised $4.0B in a Series D

Lead investors
Alphabet, Amazon, LG CNS, Calm Ventures, SK Telecom, 7GC & Co., SquareOne Capital, Salesforce Ventures, Zoom Ventures, Spark Capital, Sam Bankman-Fried, Jaan Tallinn

Exit Predictor

- **IPO:** 82% probability
- **M&A:** 12% probability
- **No exit:** 6% probability

Success: 94% probability

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

performance, widening its significant lead in coding skill over competitor models.[11] The new features and improvements continue to make Anthropic a leading choice for enterprise GenAI deployment, as the 3.5 model's skill in handling complex problems makes it well suited to customer support or software development applications. Recent enterprises to adopt Claude models include US intelligence and defense agencies—through a partnership with Palantir—and Amazon, which elected to use the model in its new version of Alexa.[12]

Leadership

The company is co-led by CEO and Co-founder Dario Amodei and President and Co-founder Daniela Amodei. The two are siblings, and neither reports to the other. At OpenAI, Dario focused on research, and Daniela on safety and policy. Dario earned a Ph.D. in biophysics from Princeton University and worked as a research scientist at Baidu and Google. Daniela comes from a nontechnical background; she was a risk manager at Stripe and led human resources, business operations, and technical safety teams at OpenAI.

In October, Anthropic added another OpenAI co-founder through the hiring of Durk Kingma. Kingma, who left OpenAI in 2018 for Google, now joins Anthropic in a research role. Earlier this year, Anthropic also brought in OpenAI Co-founder John Schulman and former a co-lead of OpenAI's superalignment team, Jan Leike. Leike previously resigned from OpenAI citing disagreements with leadership and concerns over safety culture. The moves underscore Anthropic's investment in developing safe models.

Competitive landscape

The ongoing release of new models and products for Claude 3.5 has positioned Anthropic well among other foundation model developers. The company is reportedly projected to reach $1 billion in revenue this year, marking 500% growth over last year.[13] As the majority of revenue comes from third-party API sales, this rapid growth is driven by Anthropic's Amazon Web Services (AWS) partnership and large enterprise customer base. While OpenAI still remains the most widely adopted enterprise model, Anthropic has been the beneficiary of existing AWS customers leveraging Amazon Bedrock. Additionally, it has found success by tailoring its product offering to enterprise applications. Claude 3.5's baked-in security, strong coding capabilities, new user interface, and computer-use updates make it well suited for more complex use cases.

Outlook

In the highly competitive foundation model space, Anthropic has positioned its model among the highest performers. In overall quality, benchmarking sites Artificial Analysis and LiveBench place the model behind only OpenAI's new o1 models.[14, 15] With similar pricing and stronger coding capabilities, Claude remains a legitimate alternative. The release of Claude 3.5 Opus, expected before the end of the year, may help Anthropic close the current performance gap. Additionally, the focus on safety and corporate partnerships will continue to draw enterprise customers. However, with OpenAI expected to set a new bar for performance with the release of GPT-5, Anthropic will have to build upon the success of its new models.

11: "LiveBench: A Challenging, Contamination-Free LLM Benchmark," Abacus.AI, n.d., accessed November 11, 2024.
12: "Ask Claude: Amazon Turns to Anthropic's AI for Alexa Revamp," Reuters, Greg Bensinger, August 30, 2024.

13: "AI Startup Anthropic Expects Revenue Surge as It Ramps Up Competition With OpenAI," CNBC, Deirdre Bosa, September 24, 2024.
14: "Independent Analysis of AI Models and API Providers," Artificial Analysis, n.d., accessed November 14, 2024.
15: "LiveBench: A Challenging, Contamination-Free LLM Benchmark," Abacus.AI, n.d., accessed November 11, 2024.

Financing history

Series A	Series B	Series C1	Late-stage VC	Series D	Late-stage VC
May 28, 2021	**April 29, 2022**	**May 15, 2023**	**October 27, 2023**	**January 26, 2024**	**March 27, 2024**
Total raised $124.0M	**Total raised** $980.0M	**Total raised** $450.0M	**Total raised** $2.0B	**Total raised** $1.2B	**Total raised** $4.0B
Pre-money valuation $426.0M	**Pre-money valuation** $2.0B	**Pre-money valuation** $4.1B	**Pre-money valuation** N/A	**Pre-money valuation** $18.2B	**Pre-money valuation** N/A
Lead investor Jaan Tallinn	**Lead investor** Sam Bankman-Fried	**Lead investors** Salesforce Ventures, Zoom Ventures, Spark Capital	**Lead investor** Alphabet	**Lead investor** Menlo Ventures	**Lead investor** Amazon

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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