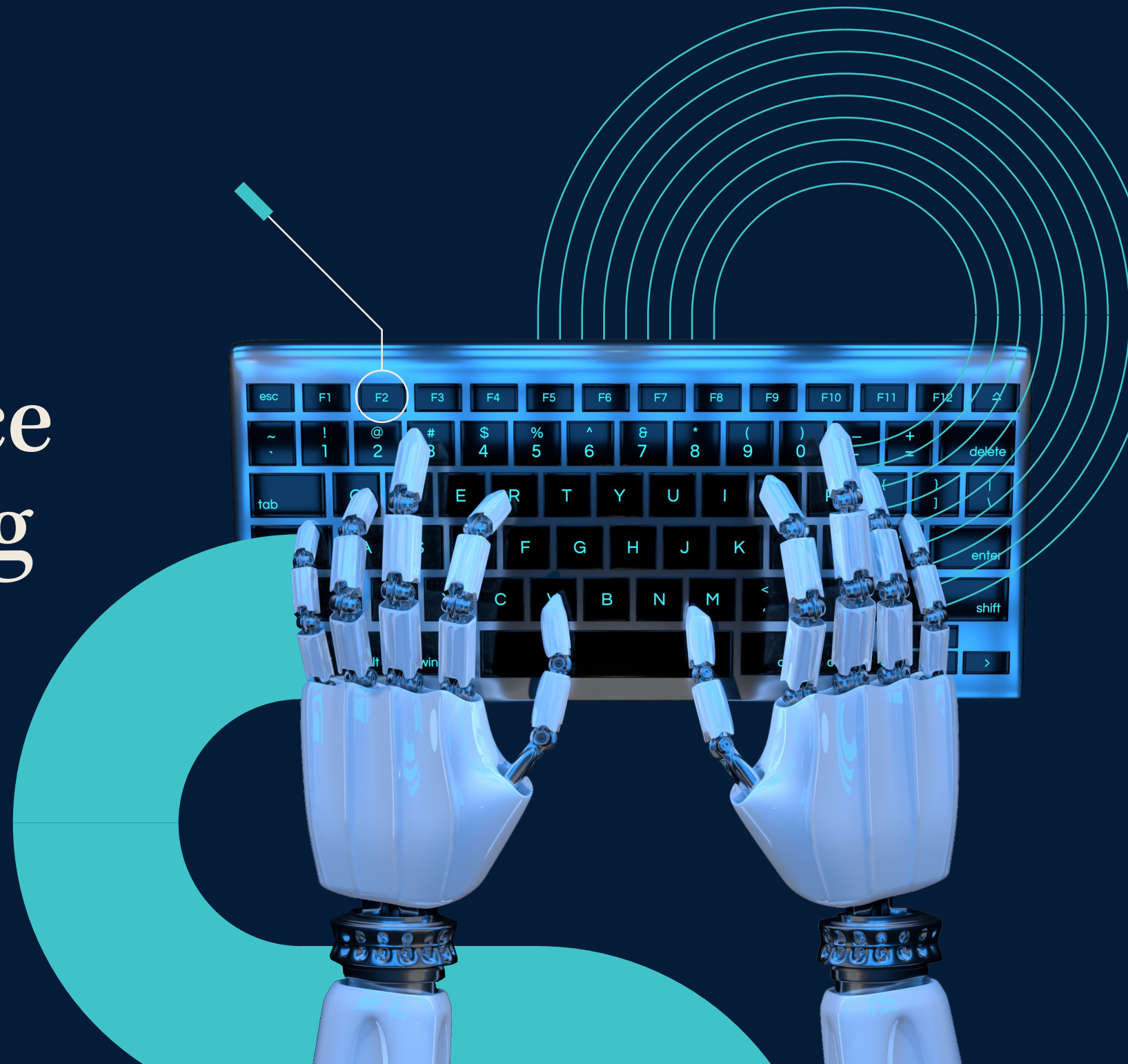# PitchBook

EMERGING TECH RESEARCH

Artificial Intelligence & Machine Learning Report

VC trends and emerging opportunities

Q1 2023

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

Contents

Institutional Research Group

Analysis

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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.

AI & ML landscape

1 Horizontal platforms

2 Vertical applications

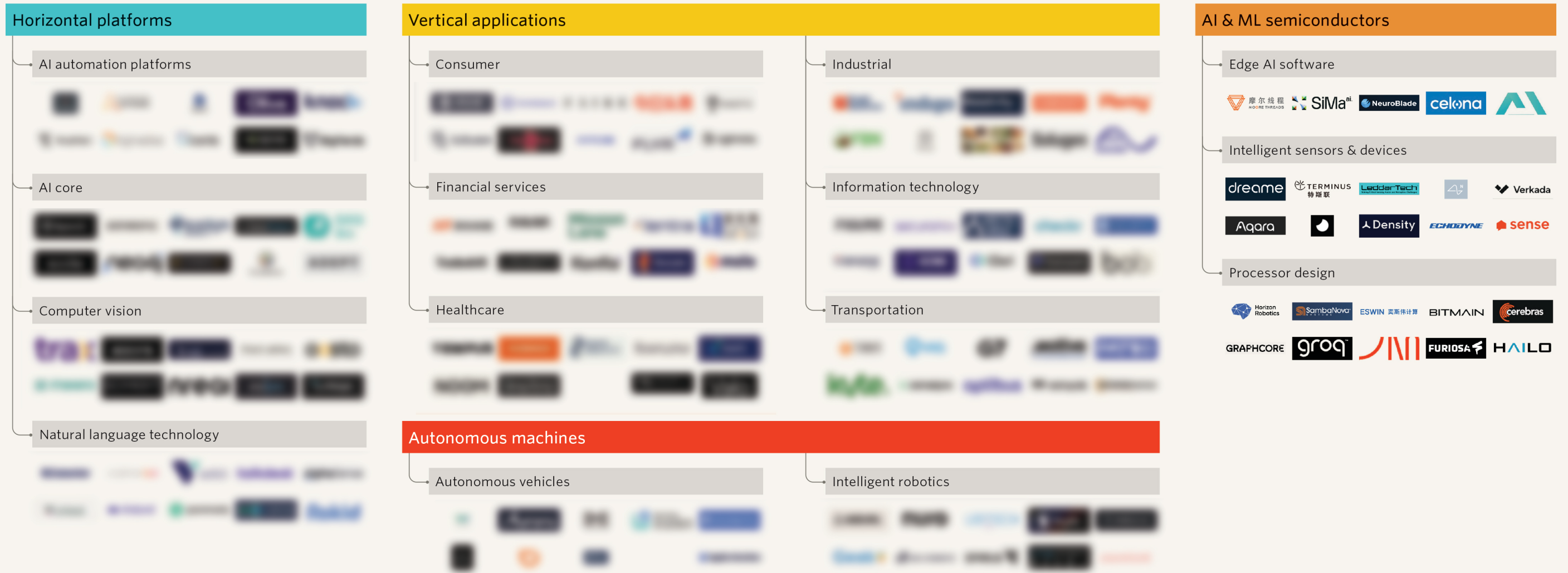3 Semiconductors

4 Autonomous machines

AI & ML VC ecosystem market map

Click to view the interactive market map on the PitchBook Platform.

Market map is a representative overview of venture-backed or growth-stage providers in each segment. Companies listed have received venture capital or other notable private investments.

Horizontal platforms

AI automation platforms

AI core

Computer vision

Natural language technology

Vertical applications

Consumer

Financial services

Healthcare

Industrial

Information technology

Transportation

Autonomous machines

Autonomous vehicles

Intelligent robotics

AI & ML semiconductors

Edge AI software

摩尔线程 MOORE THREADS · SiMa.ai · NeuroBlade · celona · ∧

Intelligent sensors & devices

dreame · TERMINUS 特斯联 · LadderTech · AI · Verkada
Aqara · ● · Density · ECHODYNE · sense

Processor design

Horizon Robotics · SambaNova · ESWIN 奕斯伟计算 · BITMAIN · cerebras
GRAPHCORE · groq · JNII · FURIOSA · HAILO

VC activity

VC activity ticked up in Q1 based on OpenAI's unconventional corporate investment from Microsoft. We tracked $22.7 billion in investment during the quarter, including $12.7 billion from generative AI investments including OpenAI. If OpenAI's deal is excluded, then VC deal activity continued to decline in terms of deal value and count. Vertical applications companies only raised $6.0 billion in Q1 after raising $50.6 billion in 2022, demonstrating weakness in conventional domain-specific software. Investors lack interest in software solutions unless they drive the generative field forward. Generative AI software continues to earn outstanding valuation multiples, with research startups striking deals based on the level of computing power and talent they will need to make breakthroughs. VC investors are adapting to these requests yet not supporting the capital demands of more mature companies that are unlikely to make research breakthroughs.

We are beginning to see the beginning of a generative AI acquisition trend. Microsoft's investment in OpenAI is structured similarly to an acquisition, with a reported profit share and exclusive distribution rights, demonstrating the value of third-party technology to tech giants. Both Snowflake and Databricks have recently acquired generative AI startups in Neeva and Rubicon, respectively. Neeva is a neural search startup with significant latency improvements over conventional AI searches, while Rubicon focuses on data storage. Apart from these trends, acquisition values have been minimal, only reaching $3.3 billion in disclosed deal value in Q1 after reaching $48.7 billion in disclosed exit value in 2022. Tech giants were mostly dormant, and Iguazio's $50.0 million acquisition by McKinsey fell below the company's prior private valuation.

AI & ML VC deal activity
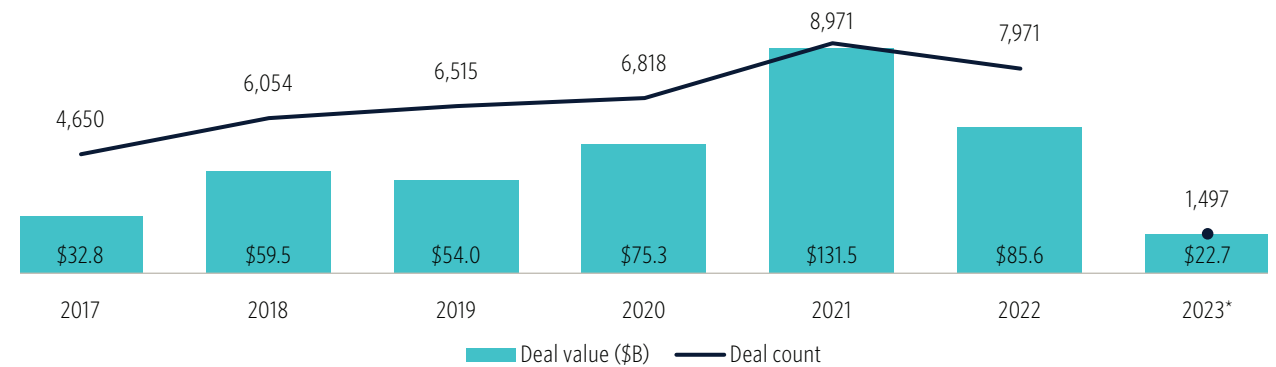
Source: PitchBook • Geography: Global • *As of March 31, 2023

AI & ML VC exit value ($B) by type
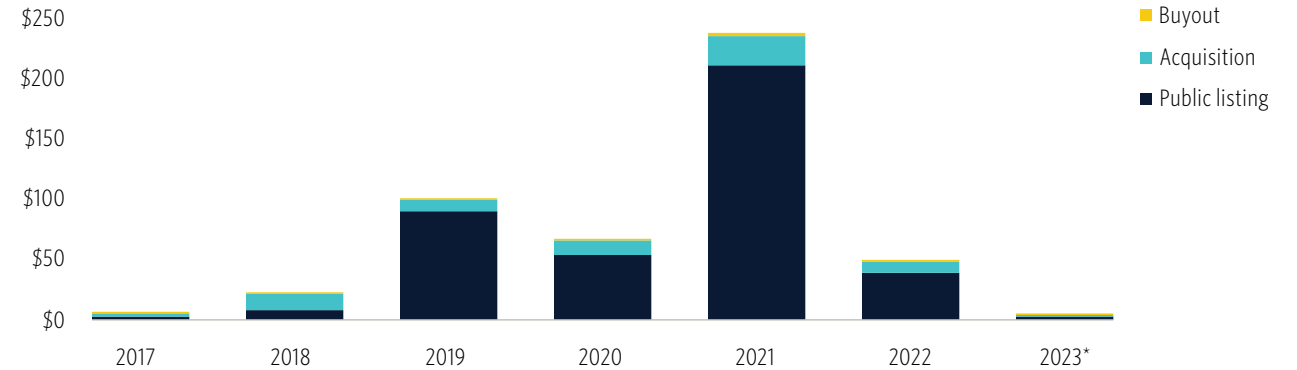
Source: PitchBook • Geography: Global • *As of March 31, 2023

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

Company	Close date	Subsegment	Stage	Deal value ($M)	Lead investor(s)	Valuation step-up
OpenAI	January 23, 2023	AI core	N/A	$10,000.0	Microsoft	N/A
Monogram Health	January 9, 2023	AI automation platforms	Series C	$375.0	CVS Health, Cigna, Frist Cressey Ventures, Humana Memorial Hermann Foundation, Norwest Venture Partners, TPG	N/A
Asimov	January 5, 2023	AI in healthcare	Series B	$175.0	CPP Investments	9.5x
Amelia	March 7, 2023	Natural language technology	N/A	$175.0	BuildGroup, Monroe Capital	N/A
SirionLabs	January 4, 2023	AI automation platforms	Series D	$110.0	Partners Group	N/A
Trusting Social	February 10, 2023	AI in financial services	Series D	$105.0	Masan Group	N/A
Humane	March 8, 2023	Intelligent sensors & devices	Series C	$100.0	Kindred Ventures	1.1x
Zhidao Network	March 28, 2023	Transportation	Series C2	$84.0	Yixin Group, Chengdu Technology Transfer Venture, Chengdu Tongchuang Zhixing, Zhuhai Haidu Science and Technology Investment, Tencent Investment	N/A
BRETON Technology	January 5, 2023	Autonomous vehicles	Series C1	$83.2	Inner Mongolia Eerduosi Resources Company, Hunan Chasing Fund	N/A
Cardinal Operations	March 31, 2023	AI automation platforms	Series C2	$72.5	National Manufacturing Transformation and Upgrade Fund	N/A

Source: PitchBook • Geography: Global • *As of March 31, 2023

Top strategic acquirers of AI & ML companies since 2017*

Acquirer	Deal count	Investor type
Apple	21	Corporation
Accenture	19	Corporation
Microsoft	14	Corporation
Meta Platforms	12	Corporation
Cisco Systems	11	Corporation
ServiceNow	10	Corporation
DataRobot	9	VC-backed company
Intel	8	Corporation
IBM	8	Corporation
Oracle	7	Corporation

Source: PitchBook • Geography: Global • *As of March 31, 2023

Founded
2013

5,000 employees
in 25 offices globally

Total raised:
$3.5B

February 2020:
Leader in Gartner Magic Quadrant
for Data Science and Machine
Learning Platforms

Last financing valuation:
$38.0B

Last financing:
Raised $1.6B in a Series H

Lead investors:
Counterpoint Global,
Franklin Templeton
Investments, Andreessen
Horowitz, NEA

Overview

Founded in 2013, Databricks offers a data science platform that includes AI-as-a-service (AIaaS) 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 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 notebooks for ML model collaboration; a data lake, which integrates unstructured data in a central database for analytics; and data security. The company has focused on the generative AI opportunity, training a custom LLM called Dolly that can run more efficiently than GPT-4 and achieve competitive results on question-answering tasks. The model is open-source and rapidly grew to 10,000 GitHub stars. The company is adding to its infrastructure capabilities as well by acquiring AI data storage startup Rubicon, hardware acceleration startup MosaicML for $1.3 billion, and AI data governance startup Okera. We believe the company is surpassing its peer Snowflake in AI capabilities.

Leadership

Databricks' management has high technical expertise capable of generating product-led growth and has increased its public company experience. The company was founded by seven early contributors to Apache Spark, and all the cofounders remain at the company. CEO and co-founder Ali Ghodsi earned a Ph.D. in distributed computing and was VP of engineering before being promoted to CEO at the start of the company's growth phase in 2016. CFO Dave Conte previously took Splunk public in the same role, which suggests Databricks' accounts will be ready for scrutiny by public markets. The board features cofounders and VC investors, including Andreessen Horowitz and cofounder Ben Horowitz. In Q2 2022, Databricks hired the general counsel from DocuSign, which will provide public company experience as Databricks pursues a public listing.

Competitors

Databricks stands out in the AI & ML market by supporting machine learning operations (MLOps) atop its data lake, functionality that distinguishes it from legacy vendors such as SAP, Microsoft, and AWS, while also being 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 ML workflows and may improve their offerings in the future. The company gains market credit for scaling ML model deployment and management across a variety of compute clusters—a critical problem for data scientists new to ML.

Outlook

Databricks has achieved the necessary scale and growth to realize high performance in public markets. The company reached $1.0 billion in revenue in 2022 with 60% revenue growth.

The company has cut its internal valuation by 10%, according to Ghodsi, suggesting that its valuation is staying relatively resilient as well.[5] 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.

5: "What Is Data Management Company Databricks Really Worth?" Fortune, Jessica Matthews, March 8, 2023.

Financing history

Series A	Series B	Series C	Series D	Series E	Series F
September 24, 2013	June 30, 2014	December 15, 2016	August 22, 2017	February 5, 2019	October 22, 2019
Total raised: $14.0M	**Total raised:** $33.0M	**Total raised:** $60.0M	**Total raised:** $140.0M	**Total raised:** $250.0M	**Total raised:** $400.0M
Pre-money valuation: $34.0M	**Pre-money valuation:** $214.0M	**Pre-money valuation:** $453.0M	**Pre-money valuation:** $800.0M	**Pre-money valuation:** $2.5B	**Pre-money valuation:** $5.8B
Investor(s): Andreessen Horowitz	**Investor(s):** NEA	**Investor(s):** NEA	**Investor(s):** Andreessen Horowitz	**Investor(s):** Andreessen Horowitz	**Investor(s):** Andreessen Horowitz

About PitchBook Emerging Tech 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 Emerging Tech 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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Pharmatech