

State of AI in China

China's big tech in AI, private market landscape, emerging trends



WITHIN 24 HOURS

Webinar recording will be distributed



The presentation will also be sent to you. Feel free to share with colleagues. The resolution of some slides may be suboptimal due to the webinar software. Those slides will look fine in the presentation that we send you.

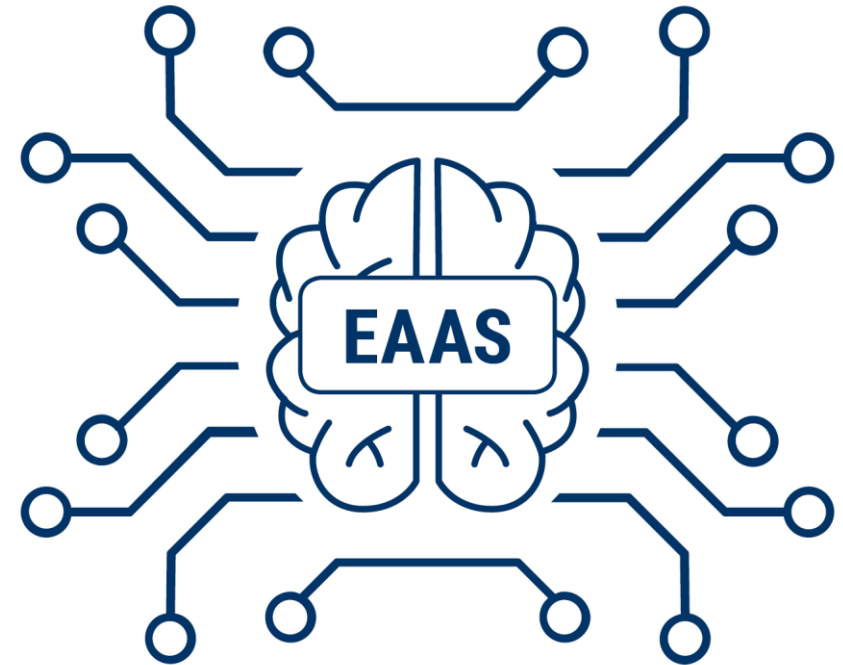
JOIN THE CONVERSATION ON TWITTER

@cbinsights
@deeplearning
#AI

WHO WE ARE

The technology market intelligence platform.

CB Insights software lets you predict, discuss, and communicate emerging technology trends using data in ways that are beyond human cognition. We are a leader in the Expert Automation & Augmentation Software (EAAS) space.



TRUSTED BY THE WORLD'S LEADING COMPANIES



F-PRIME

FIRSTMARK 



NORWEST | VENTURE PARTNERS



SEQUOIA 

“We use CB Insights to find emerging trends and interesting companies that might signal a shift in technology or require us to reallocate resources.”



Beti Cunniff, Corporate Strategy, Microsoft



— CBINSIGHTS — COUNCILS

CBI Councils bring together experienced executives to accelerate their success through the sharing of experience-based insights that inform business decisions and help solve complex strategic, organizational and growth challenges.

If you are a C-level, EVP or SVP level executive at a company doing \$1B+ revenue, request an invite by emailing councils@cbinsights.com.

PARTICIPATING COMPANIES



LEARN MORE HERE

events.cbinsights.com/councils
councils@cbinsights.com

ABOUT THE ANALYST

Deepashri Varadharajan



Senior Analyst & Writer (AI)

[@deepalearning](#) | dvaradharajan@cbinsights.com

Deepashri Varadharajan received her undergraduate degree in engineering at Vellore Institute of Technology in India. She later studied journalism, and received a Master's degree from the Columbia University Graduate School of Journalism.

Before CB Insights, Deepashri worked for organizations including Al Jazeera America, Deccan Herald, and interned at Siemens India.

Most popular analyses by Deepa:

[Artificial Intelligence Trends To Watch In 2018](#)
[The State of Automation](#)

Contents

9

Macro trends & global
impact

15

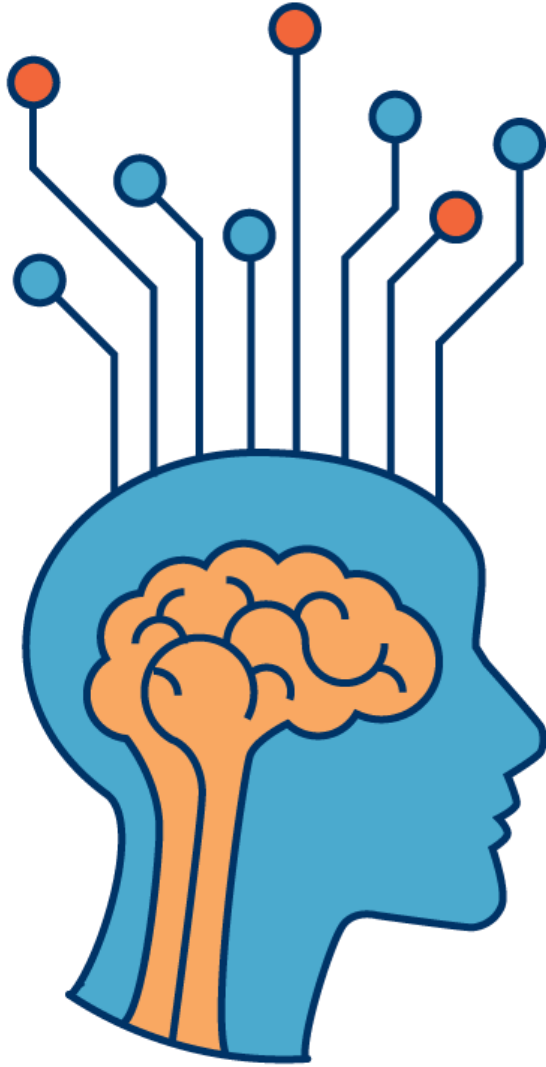
China's big tech in AI

30

AI startup landscape

35

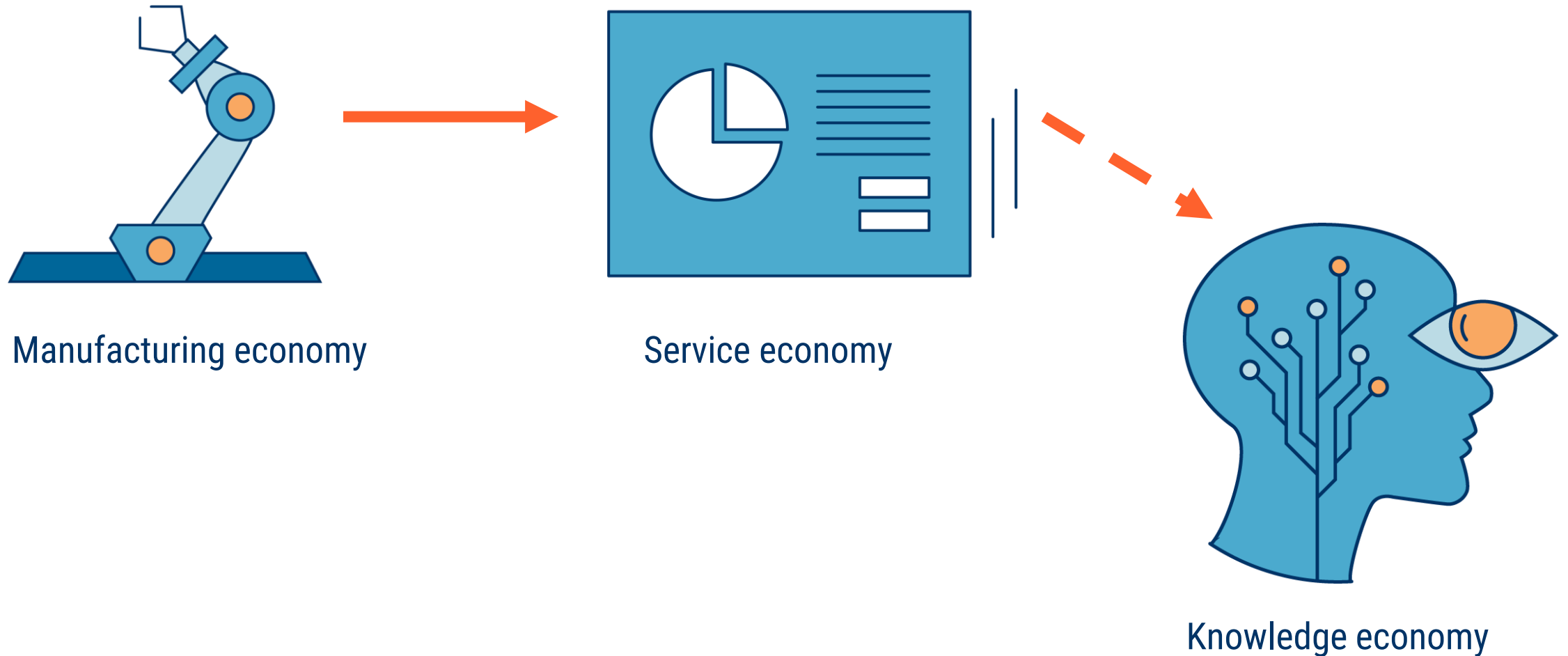
Emerging trends



RISE OF AI IN CHINA

Macro trends & global impact

China's moving towards an AI-first economy



















And it wants to lead the world in AI research

In the first step, by 2020, the overall technology and application of artificial intelligence will be synchronized with the world advanced level. The artificial intelligence industry will become a new important economic growth point. The application of artificial intelligence technology will become a new way to improve livelihood and effectively support the entry into the ranks of

Issued by the Chinese government in July 2017

Recruiting globally to address skills shortage

<div>Machine Learning Research Interns - Sunnyvale Baidu, Inc. Sunnyvale, CA, US As a research intern at Baidu, you will be uniquely positioned to contribute to this mission and level up your research experience in an industry environment. We will give you ... neuvoo.com PREMIUM Top 10% among applicants 1 month ago</div>	<div>Senior Researcher in NLP/ Speech Recognition Tencent America Bellevue, Washington Interest and experience in speech recognition, speech synthesis, natural language understanding, or dialog system. Strong coding skills in C/C++, Python, and one shell ...  Be an early applicant 1 day ago</div>
<div>Computer Vision Research Scientist / Architect (SLAM and Robotics) - Sunnyvale Baidu, Inc. Sunnyvale, CA, US PhD or MS with 2+ years of work experience in Computer Science, Computer Vision, Machine Learning, Robotics or related technical field. Mission alignment: If you want to advance... neuvoo.com  Be an early applicant 2 weeks ago</div>	<div>Principal Researcher in NLP/ Speech Recognition Tencent America Bellevue, Washington Interest and experience in speech recognition, speech synthesis, natural language understanding, or dialog system. Strong coding skills in C/C++, Python, and one shell ...  Be an early applicant 1 day ago</div>
<div>Senior System Engineer - Sunnyvale Baidu, Inc. Sunnyvale, CA, US Evaluate novel approaches of LiDAR, such as flash, MEMS mirror and phased array by simulation, experimentation, designing and testing prototypes using experience gained in ... neuvoo.com  Be an early applicant 1 week ago</div>	<div>HRBP-Bilingual Chinese and English Tencent America Bellevue, Washington 5 to 8+ years of experience in Human Resources roles such as HR Business Partner or Generalist. In-depth Employee Relations experience coupled with the ability to manage and ...  Be an early applicant 1 day ago ·  Easy Apply</div>
<div>Research Scientist / Architect (Retail AI) Baidu, Inc. Sunnyvale, CA, US Mission alignment: If you want to advance AI, we will give you the best possible platform to do that. PhD or MS with 2 years of work experience in computer vision or machine ... www.startwire.com  Be an early applicant 1 week ago</div>	<div>Natural Language & Speech Processing RESEARCH INTERNSHIP Tencent America Bellevue, Washington Tencent is a leading internet company in China and is well known for its social media applications QQ and WeChat. We are seeking natural language & speech processing research ...  Be an early applicant 1 day ago</div>

China expands AI R&D efforts

MIT and SenseTime announce effort to advance artificial intelligence research

Feb 28, 2018 | **MIT news**

Alibaba's \$15 billion global R&D push...

October 13, 2017 | **QUARTZ**

Alibaba's damo academy hires prominent computer scientist mario szegedy

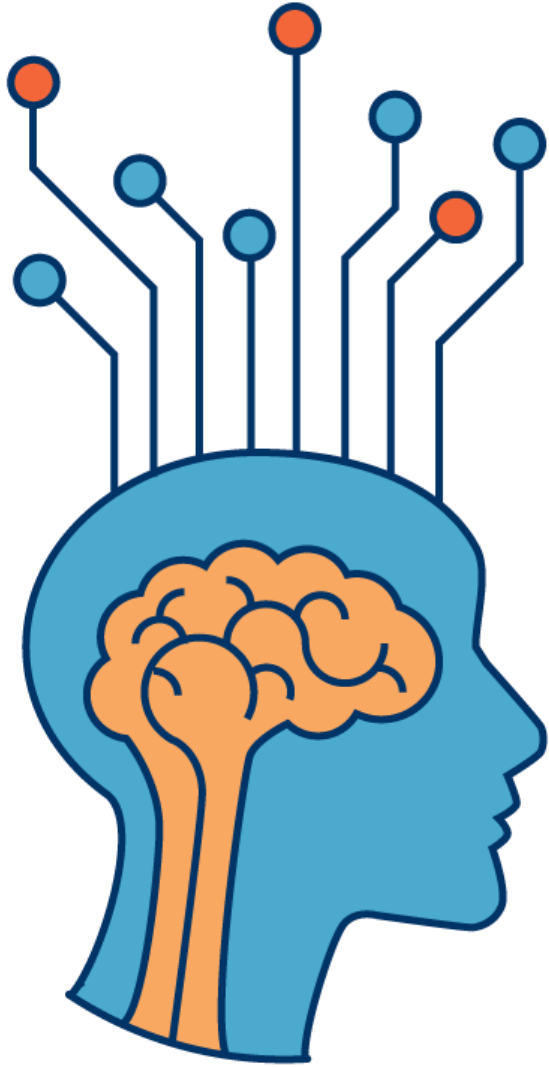
Jan 17, 2018 |

ALIZILA
NEWS FROM ALIBABA GROUP
WWW.ALIZILA.COM

Baidu plugs AI talent gap with 3 senior AI hires in the US, opens new AI labs

Jan 19, 2018 | **Forbes**

Startups + **Government** + Big Tech

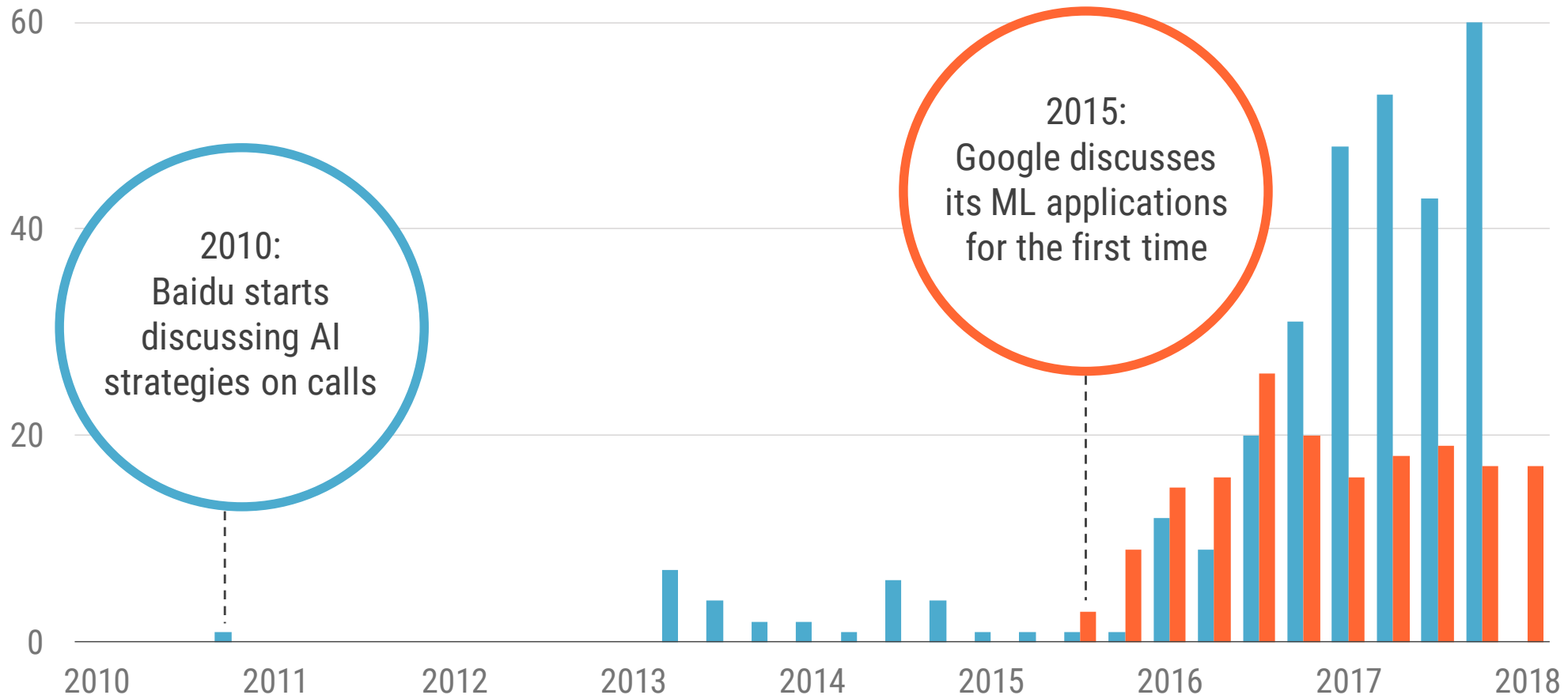


CHINA'S BIG TECH

Baidu, Alibaba,
Tencent in AI

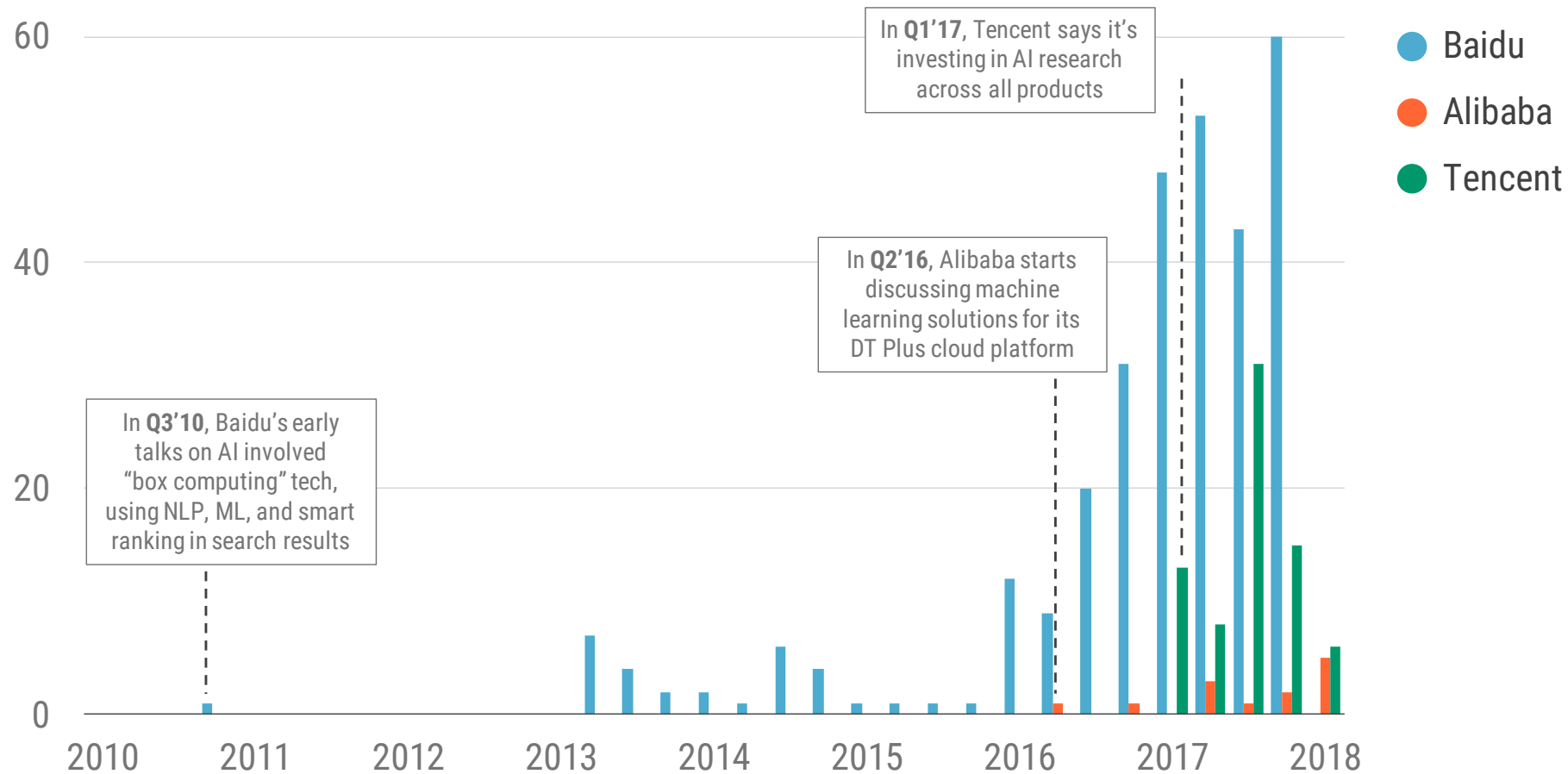
Baidu started 'AI' rebranding years before Google

Common AI-related terms in earnings calls, Q1'10 – Q1'18



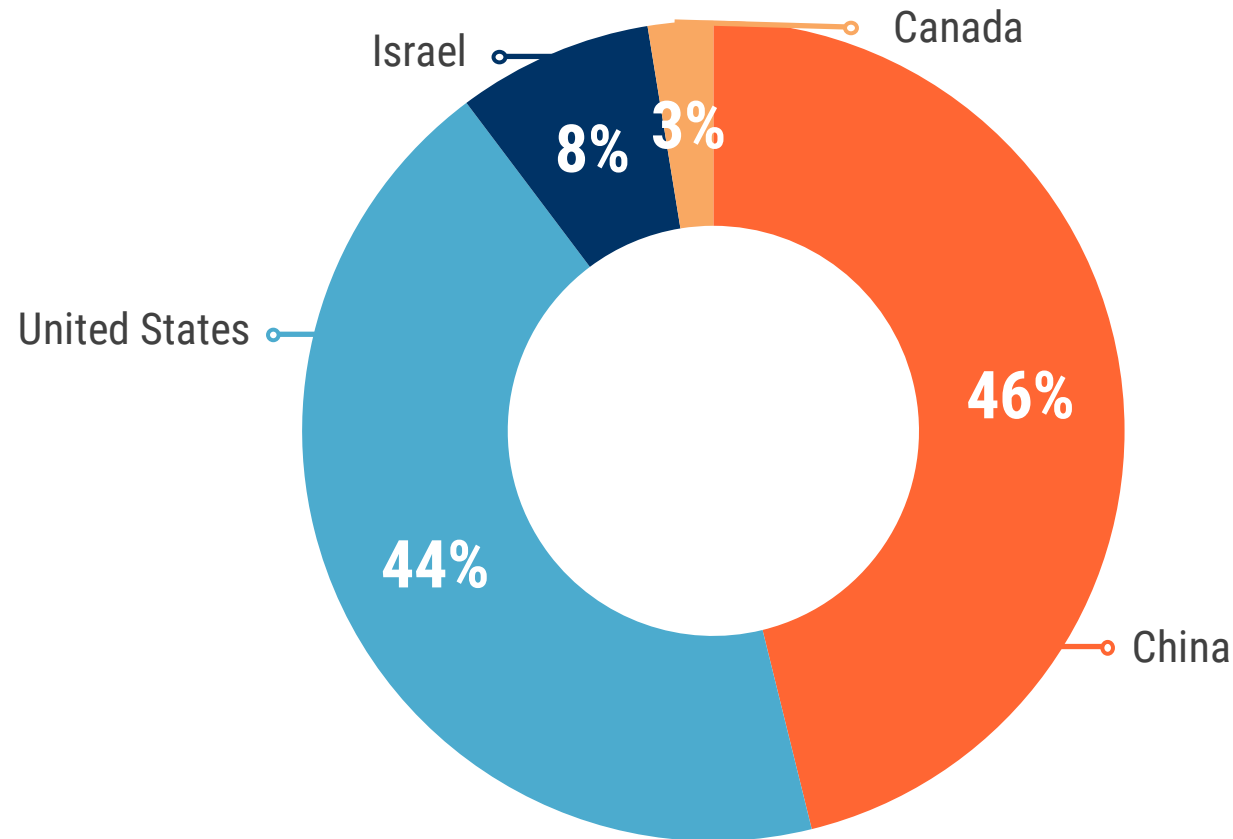
Baidu talks AI ahead of Alibaba, Tencent

Common AI-related terms in earnings calls, Q1'10 – Q1'18



Baidu, Alibaba, Tencent eye global AI startups

BAT-backed equity deal share by country, 2014 – 2018 (as of 4/20/18)



ELEMENT^{AI}

Canada
Tencent



United States
Tencent, Baidu Ventures



United States
Baidu Ventures



China
Alibaba Group, Baidu



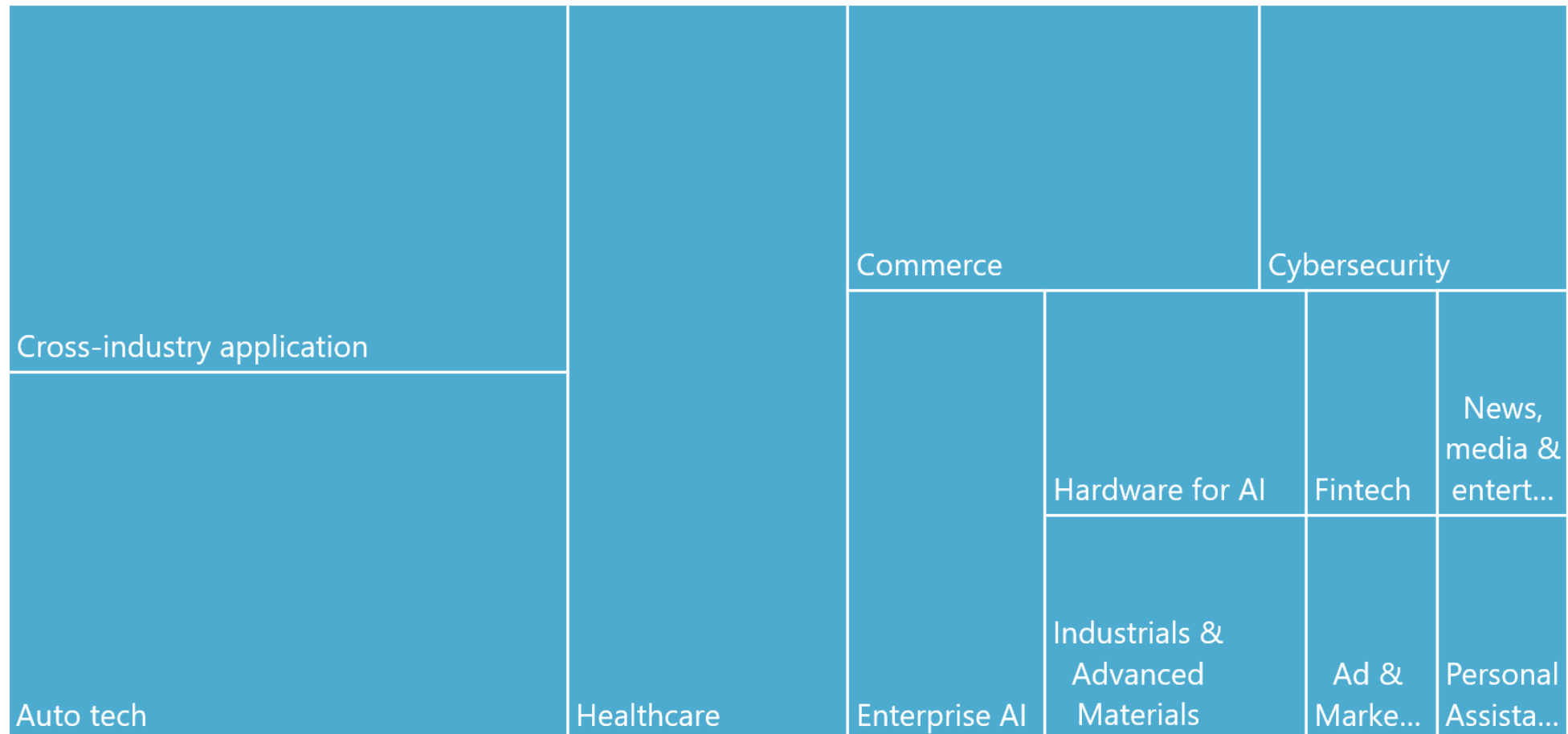
Israel
Alibaba Group



China
Tencent

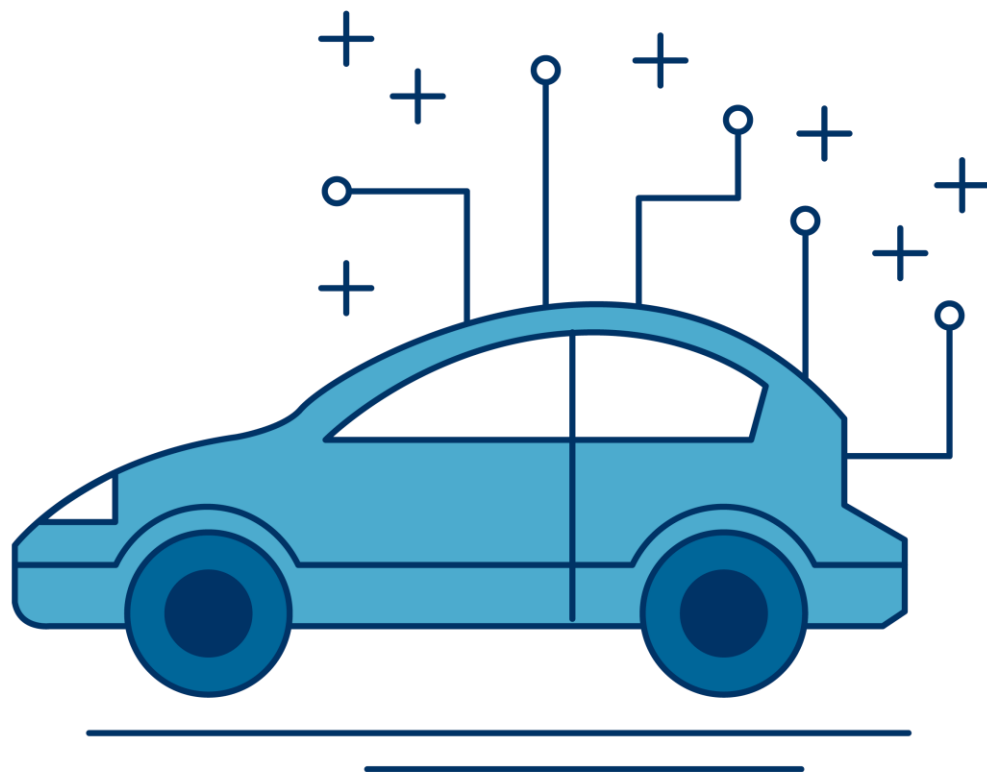
AI in auto tech is a common area of interest

BAT-backed AI equity deals by category, 2014 – 2018 (as of 4/18/18)



The government announced that China's first wave of open AI platforms will rely on **Baidu** for autonomous vehicles, **Alibaba Cloud** for smart cities, and **Tencent** for intelligent healthcare.

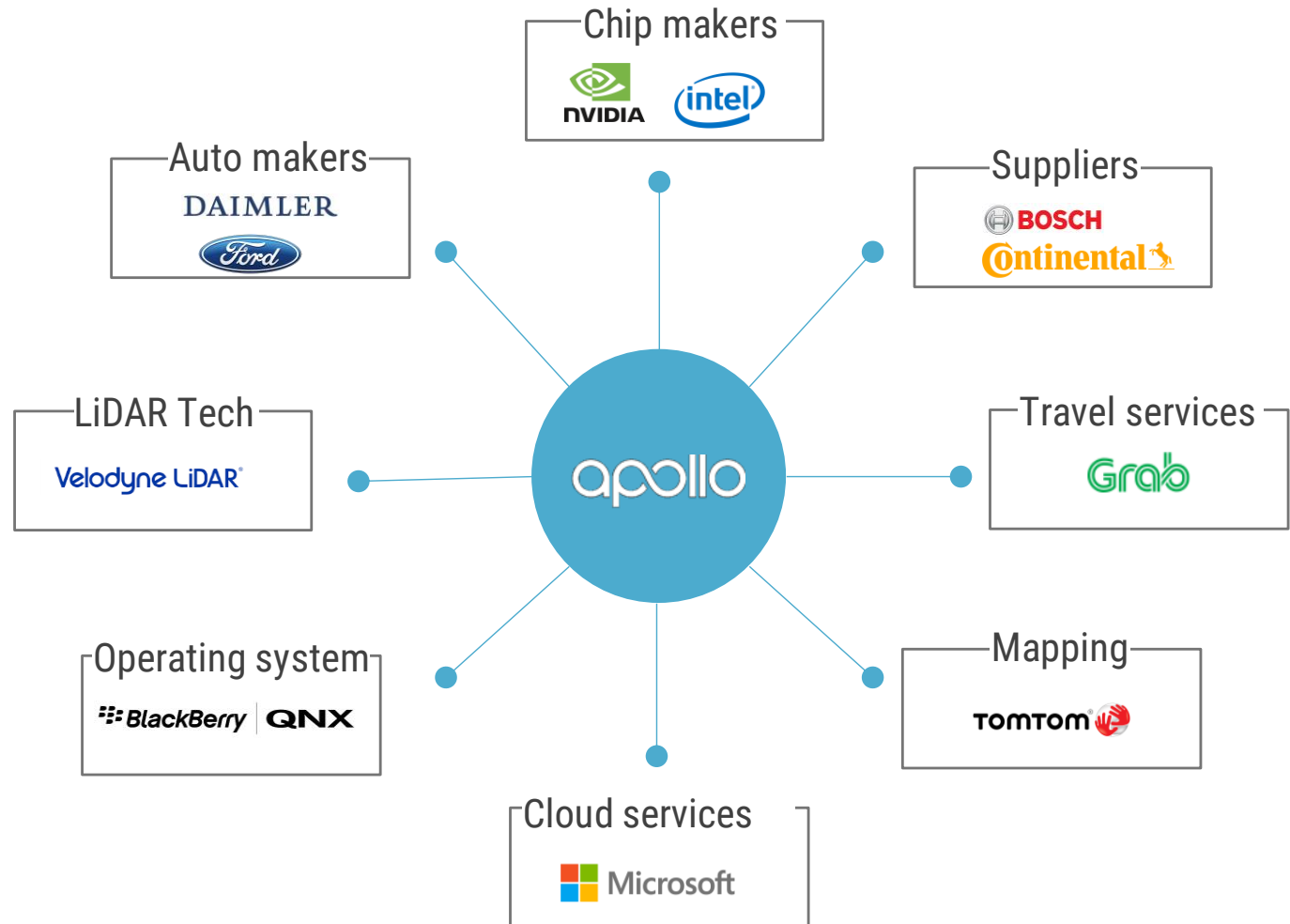
AUTONOMOUS DRIVING



In April 2017, Baidu announced, Apollo, a one-of-a-kind open platform for autonomous driving solutions.

The ecosystem currently has over 95 partners from across the globe.

Baidu builds global autonomous driving ecosystem



Partnerships source: Apollo.auto

Baidu moves fast with its autonomous projects

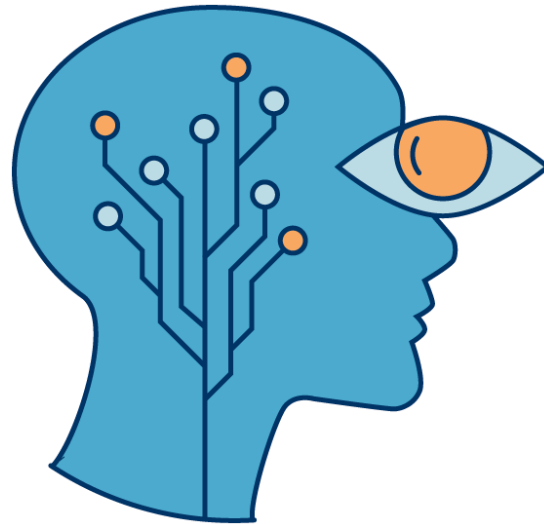


Baidu USA and California-based Access Services – which operates paratransit services for people with mobility issues and disabilities – have partnered to roll out self-driving vehicles across select routes by the end of 2018.

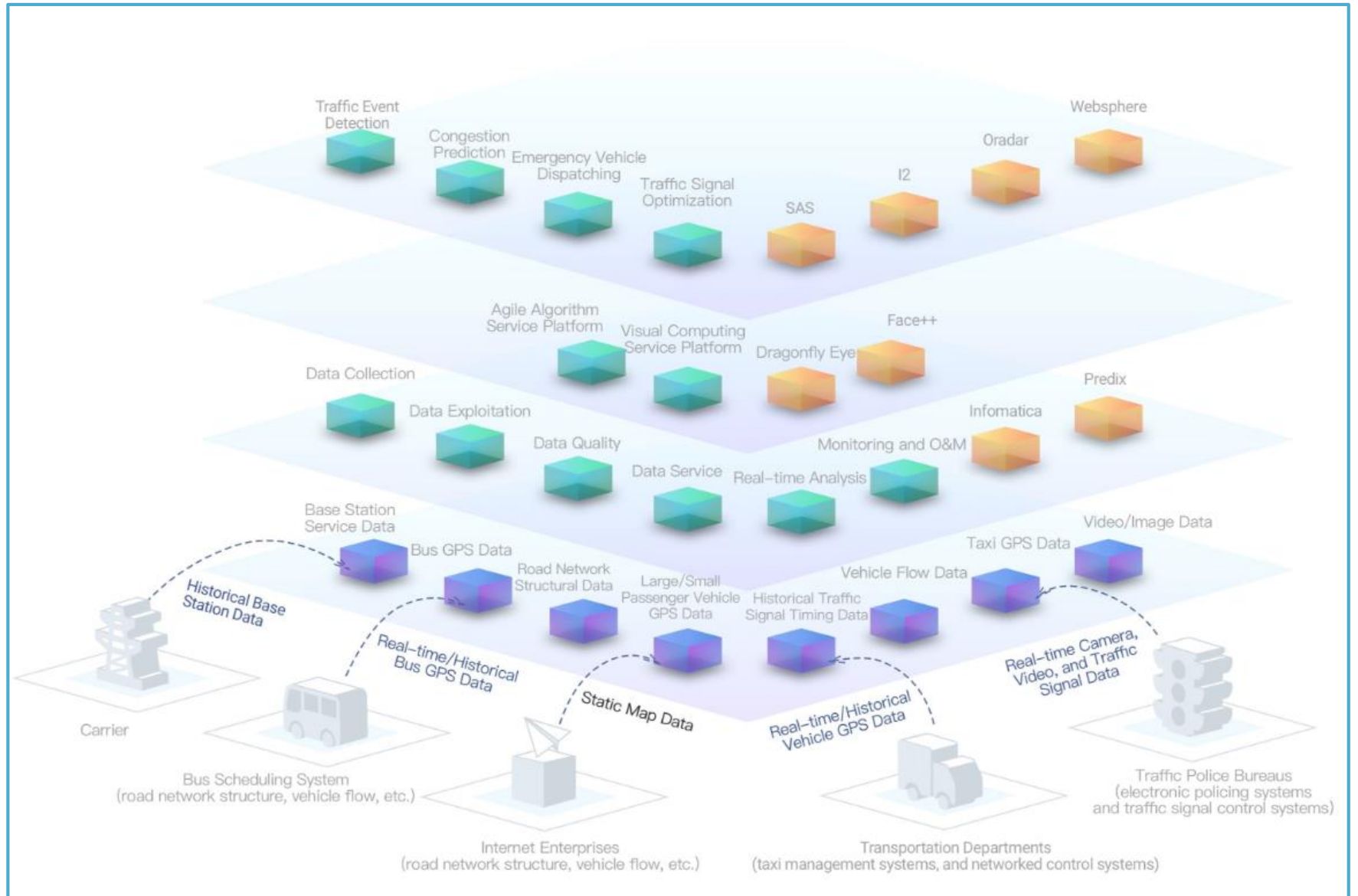


Baidu and auto maker Chery will jointly roll out L3 self-driving cars in China by 2020. (Image from a video released by Baidu)

SMART CITY



'City Brain': Alibaba Cloud for smart cities

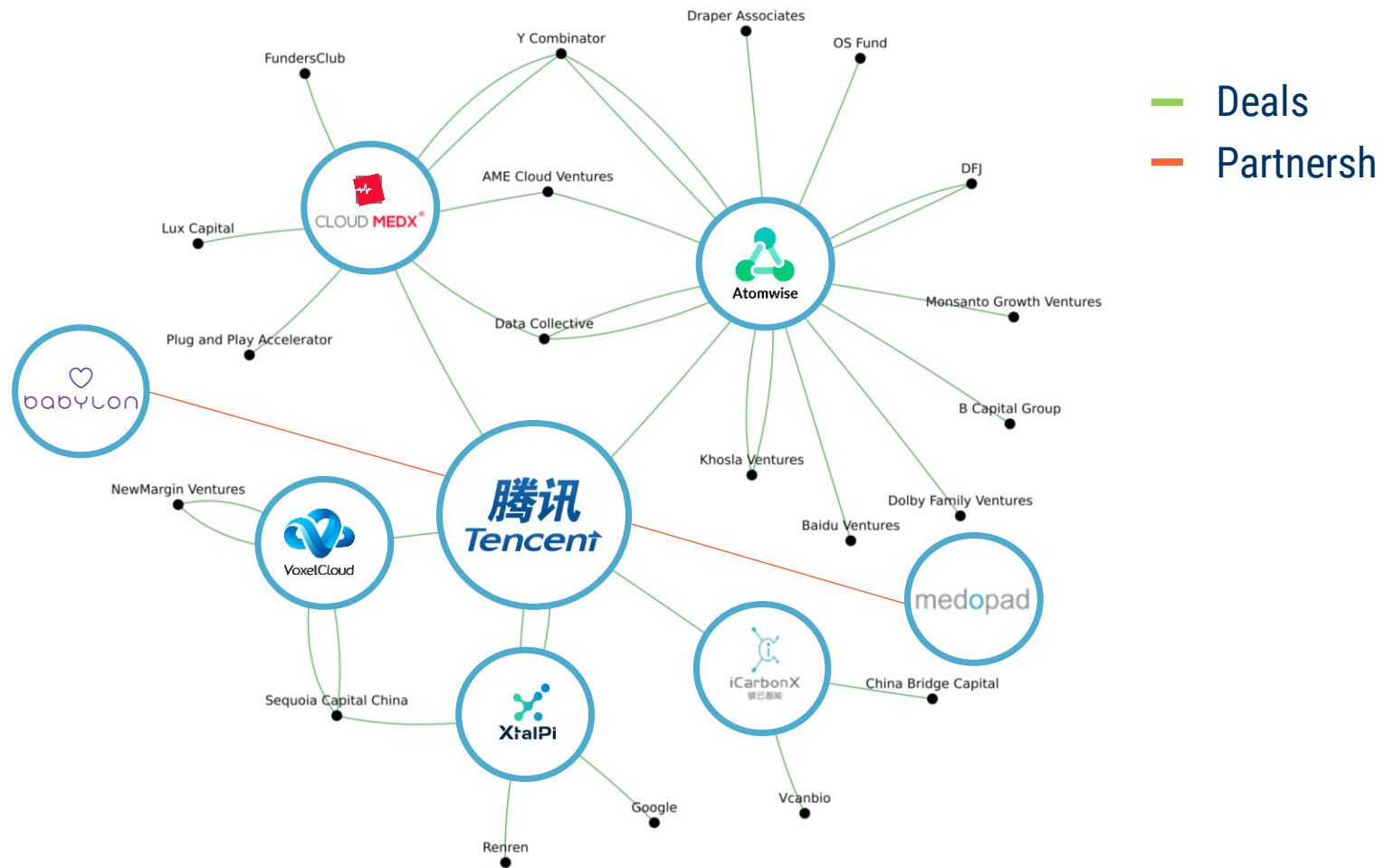


INTELLIGENT HEALTHCARE



Tencent health AI partnerships and investments

2015 – 2018 (as of 4/16/18)

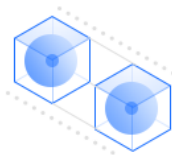


Tencent's Miying healthcare AI platform targets healthcare institutions



Early screening for esophageal cancer

10% of patients diagnosed with early esophageal cancer screening assisted by Tencent deep learning technology, with an accuracy of 90%



Early breast cancer screening

Based on Tencent deep learning technology, the accuracy rate of screening sugar nets is 99%, and the accuracy of sugar net staging is 75%.



Early lung cancer screening

Based on Tencent deep learning technology to assist early lung cancer screening lung cancer identification rate of up to 80%, lung nodule detection accuracy rate of 95%



Early colorectal cancer screening

Based on Tencent deep learning technology and experience accumulated in the early screening for esophageal cancer, it is used to assist clinicians in



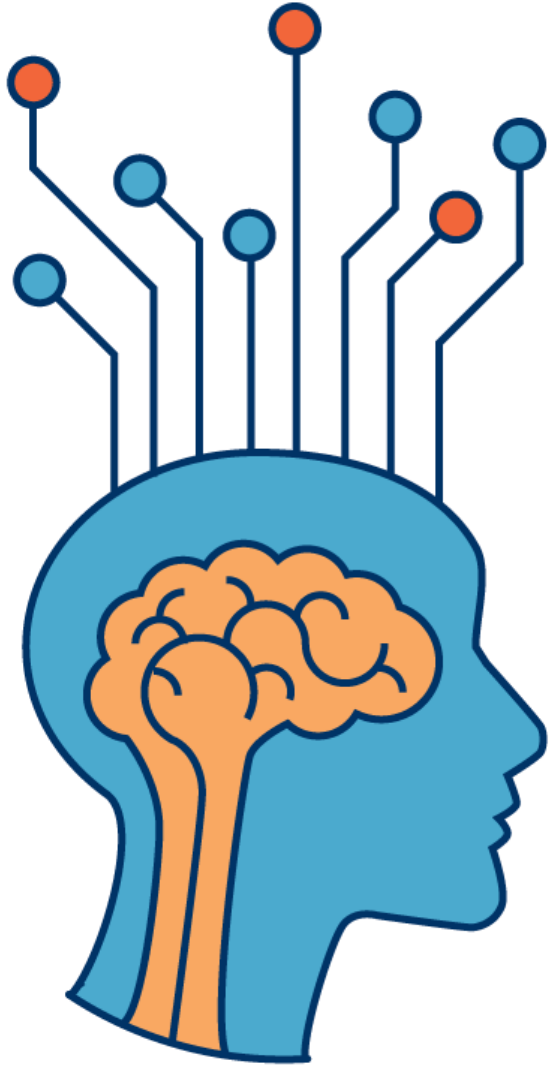
Diabetic retinopathy

Based on Tencent deep learning technology, the accuracy rate of screening sugar nets is 99%, and the accuracy of sugar net staging is 75%.



Early screening for cervical cancer

Based on Tencent's deep learning technology, it will create intelligent detection screening tools for cervical cancer to assist doctors in quickly



PRIVATE MARKET

Startup funding,
facial recognition
boom

China surpasses US in equity funding

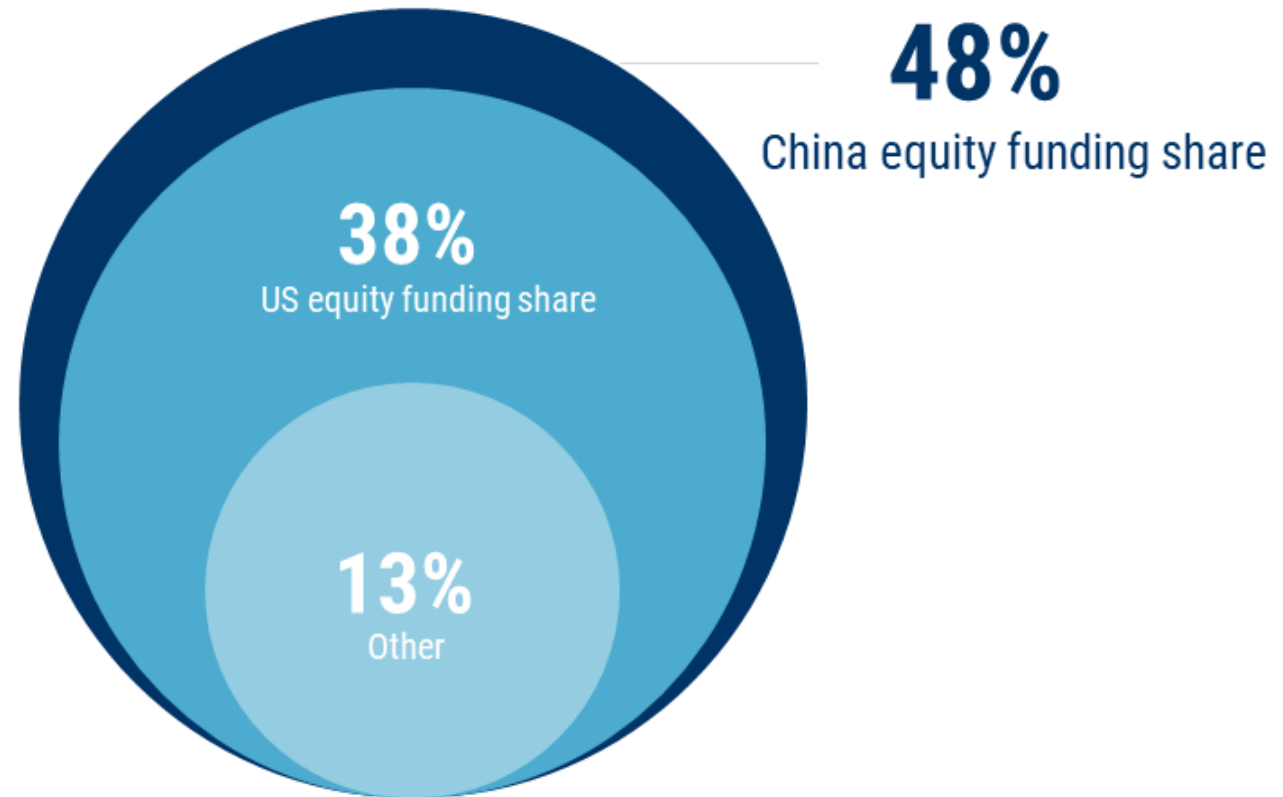
Despite a mere 9% global deal share, China accounted for nearly 48% of the total funding.

To put this proportion in perspective, in 2016, China accounted for only 11.3% of global funding.



China dominates global AI funding

US vs China total equity funding to startups in 2017



The most well-funded computer vision companies are **SenseTime**, **Face++**, and **CloudWalk**.



China invests heavily in computer vision startups

2.37bn

Total Funding since 2009

74

Deals since 2009

\$71.8M

Avg. Deal Size since 2009

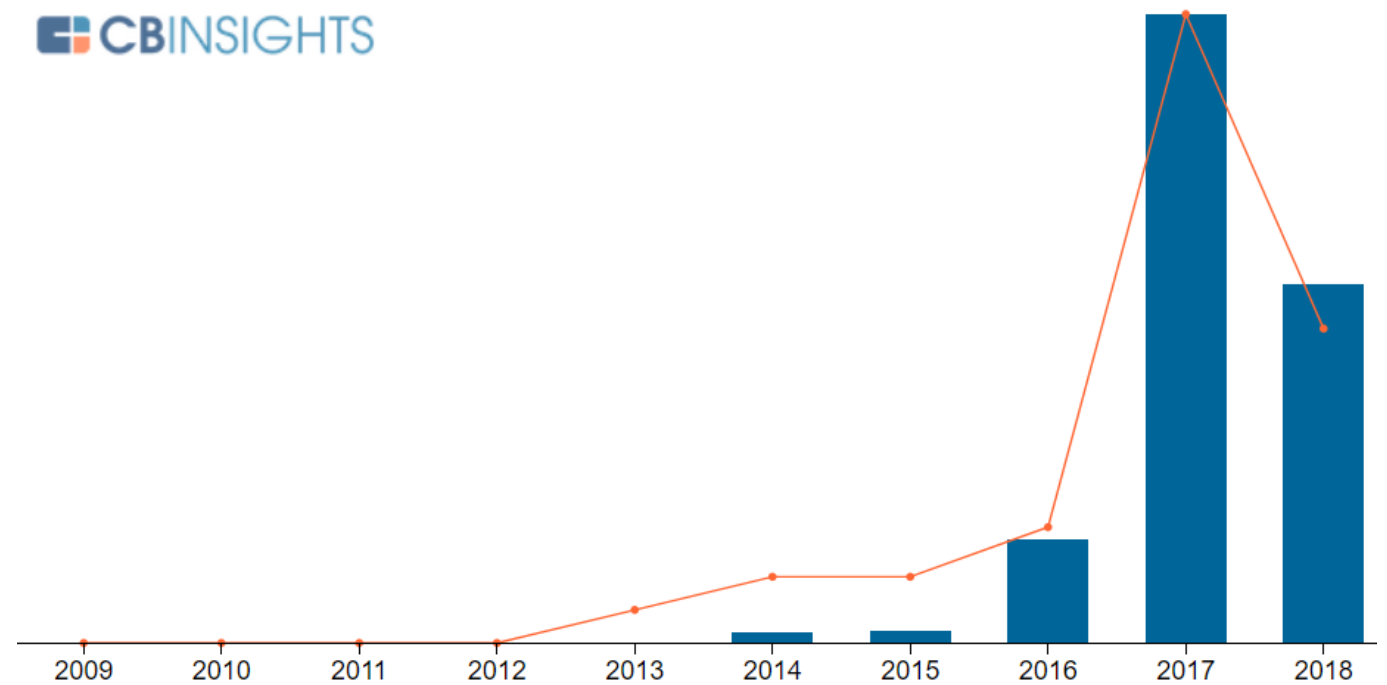
\$20M

Median Deal Size since 2009

Amount (\$)

CBINSIGHTS

Number of



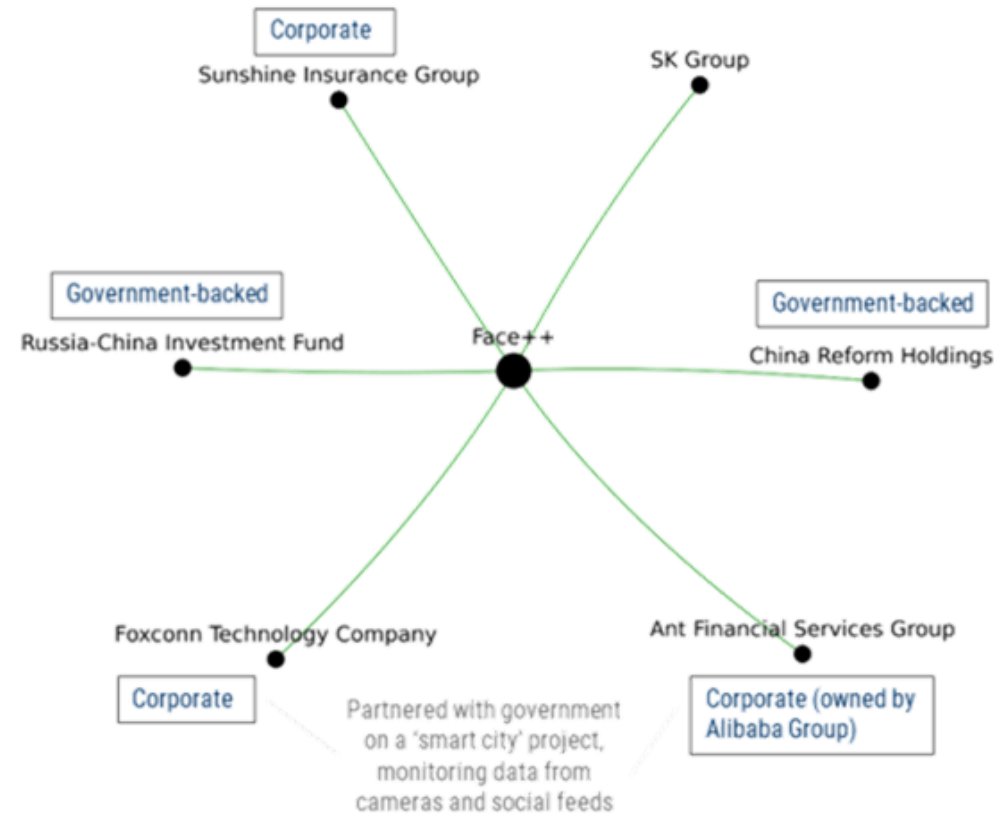
<input type="checkbox"/>	Date ▾	Round ▾	Amount ▾	Investors ▾	Valuation ▾	Sources ▾
<input type="checkbox"/>	4/9/2018	Series C	\$600M	Alibaba Group, Suning Commerce Group, and Temasek Holdings	▲ \$3,000 - \$4,500M	39
<input type="checkbox"/>	11/15/2017	Corporate Minority		Qualcomm		15
<input type="checkbox"/>	7/11/2017	Series B - III	\$230M	Advantech Capital, China International Capital Corporation, and 12 more	\$1,470M	4
<input type="checkbox"/>	4/20/2017	Series B - II	\$60M	Sailing Capital		4
<input type="checkbox"/>	12/15/2016	Series B	\$120M	CDH Investments, IDG Capital, and 2 more		5
<input type="checkbox"/>	4/26/2016	Series A - II		Star VC		2
<input type="checkbox"/>	11/8/2014	Series A		IDG Capital		
<input type="checkbox"/>		Other Investors		Green Pine Capital Partners		2

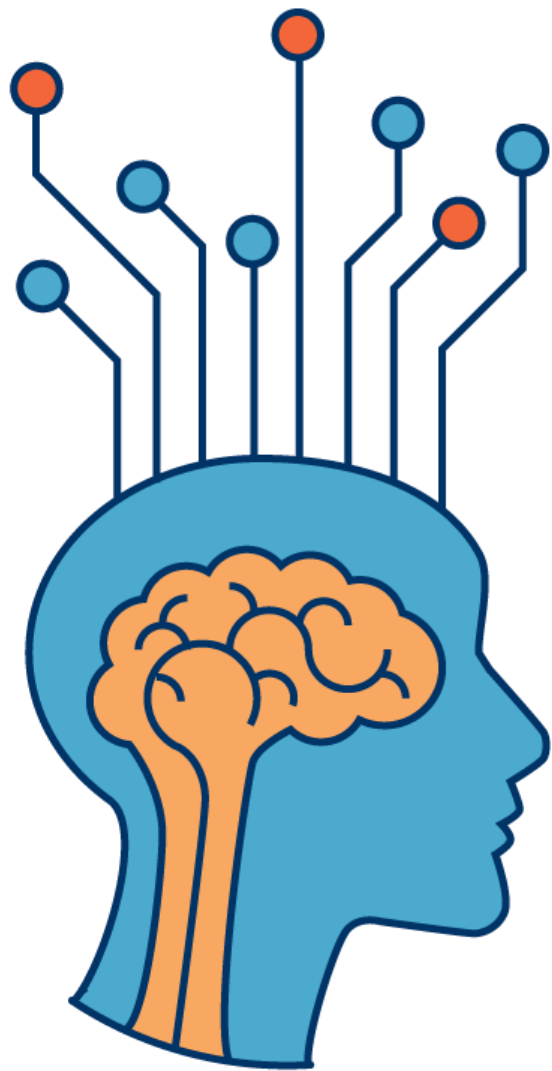
Face++ has access to 1.3 billion face data records on Chinese citizens from the Ministry of Public Security's database.



China's Face++ attracts diverse investors

Series C-II round in Q4'17





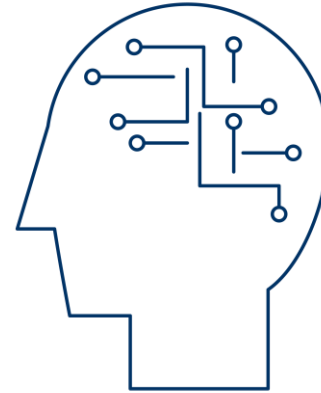
CHINA IN AI

Emerging trends

Low-cost, high-volume smart speaker market



Chinese companies pair their hardware with US AI assistants(like Cortana and Alexa) to sell smart speakers outside China



They partner with voice AI startup in China or build the AI software in-house to sell to consumer in China

Global expansion through M&A, partnerships



Partnering with and
competing with US
big tech companies



Entering new markets
by acquiring local
startups

Questions?

Twitter: @deepalearning

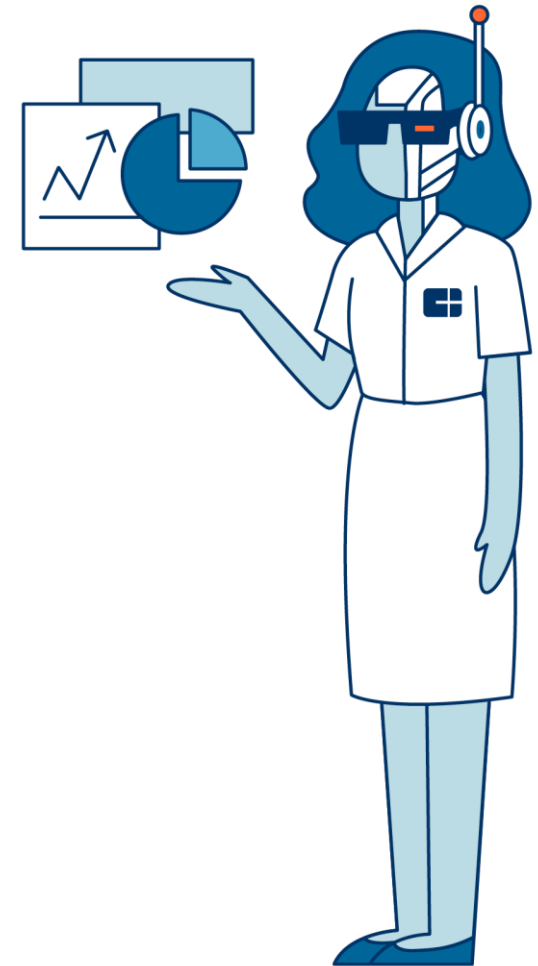
dvaradharajan@cbinsights.com



WHERE IS ALL THIS DATA FROM?

The CB Insights platform has the underlying data included in this report

[CLICK HERE TO SIGN UP FOR FREE](#)





cbinsights.com

[@cbinsights](https://twitter.com/cbinsights)