The Artificial Intelligence (AI) Webinar will begin shortly

Tuesday, June 28, 2016
1 PM NYC

Q&A
If you have questions, you can ask them at anytime via the “Questions tab.” We will do our best to answer them live and will also save a few to answer at the end.

Twitter
Share interesting insights or data points you hear on Twitter using the hashtag **#CBIAI**. We are **@cbinsights.**

Webinar recording will be distributed immediately after

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.

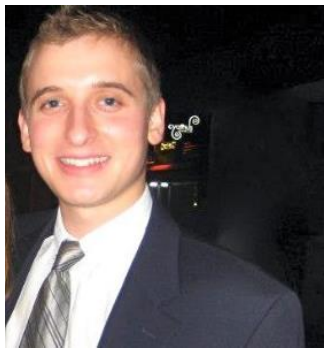
During the webinar, technical help is also available

http://support.citrixonline.com/en_US/Webinar

ABOUT OUR PRESENTER – NICK PAPPAGEORGE

@NpappaG

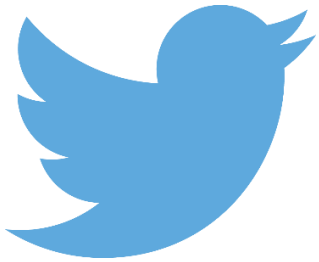
npappageorge@cbinsights.com



- Tech Industry Analyst, CB Insights
- Published research and data analysis that have been cited in Forbes, Fortune, Wired, Quartz, Re/Code, and Business Insider, among other publications
- Focuses on IoT, AR/VR, drones, and wearables research
- Formerly worked at MakerBot Industries (3D printing) in a research role
- Graduate of Hamilton College

JOIN THE CONVERSATION

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ABOUT CB INSIGHTS

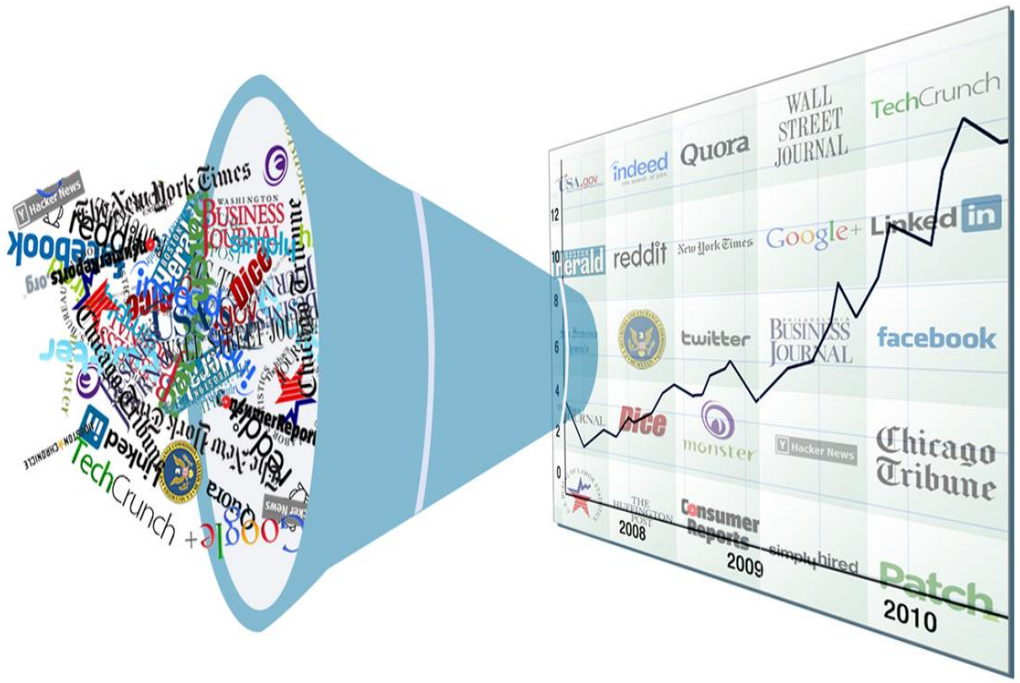
A unique combination of data science and machine learning to help you see what's next.

About CB Insights

Backed by RSTP and the National Science Foundation, CB Insights uses data science and machine learning to help our customers predict what's next—their next customer, their next investment, the next market they should attack, the next move of their competitor or the next company they should acquire.

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Forbes

"A detailed discussion of data collection and how the company parses them is written by CB Insights' data scientists; it convincingly tells the story of scalability and accuracy for what they call "The Cruncher."

From "Predictive Analytics And Novel Visualization Draw Customers To 'Must Have' Data" published April 8, 2015

WHAT WE'LL COVER TODAY

1. **Definitions of AI**
   What it is, shape of industry, verticals where it's being applied

2. **Investment Trends & Players**
   Equity funding to AI, deal share by stage, and corporates

3. **Focus: Healthcare**
   Investment trends, companies to watch

4. **Other Hot Areas**
   Drilling into Ads, B.I., and opportune areas for investment

5. **Where AI Is Going**
   Subindustry opportunities, big exits, and industry news

ARTIFICIAL INTELLIGENCE: THE NEW TECH FOCUS

"It's the first inning. It might even be the first guys up at bat. We're on the edge of the golden age [of AI]."



Jeff Bezos
CEO, **Amazon**

"I think advances in AI can help save peoples lives."



Mark Zuckerberg
CEO, **Facebook**

"In the long run, I think we will evolve in computing from a mobile-first to an AI-first world."



Sundar Pichai
CEO, **Google Inc.**

"Artificial intelligence will continue to be an unceasing core for Baidu Innovations."

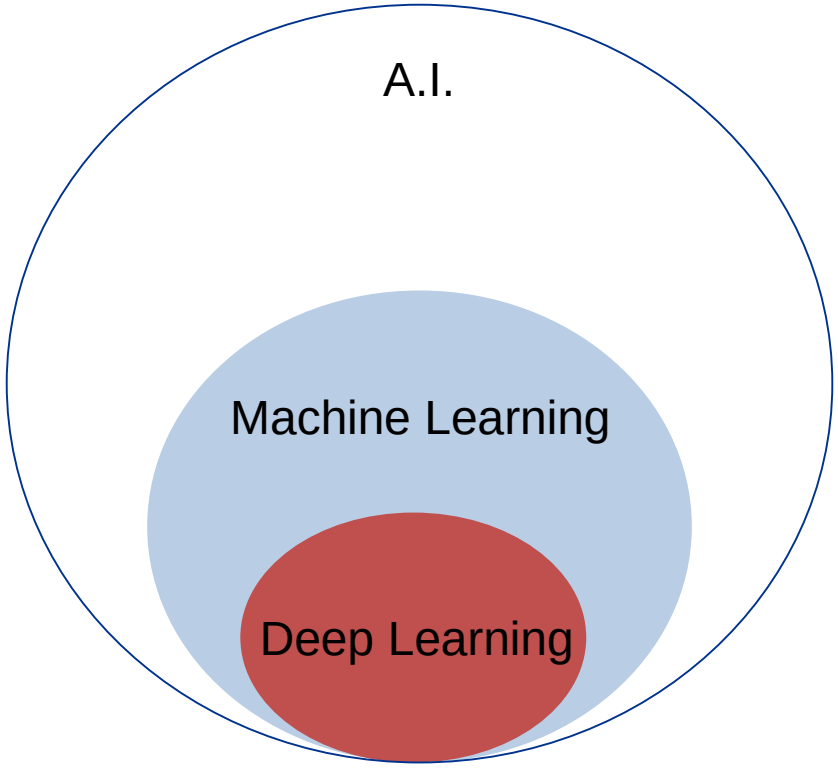


Robin Li
CEO, **Baidu**



Our definition of AI: companies applying AI solutions to verticals like healthcare, advertising, and finance as well as those developing general-purpose AI tech.

WHAT IS AI? KNOW YOUR BUZZWORDS



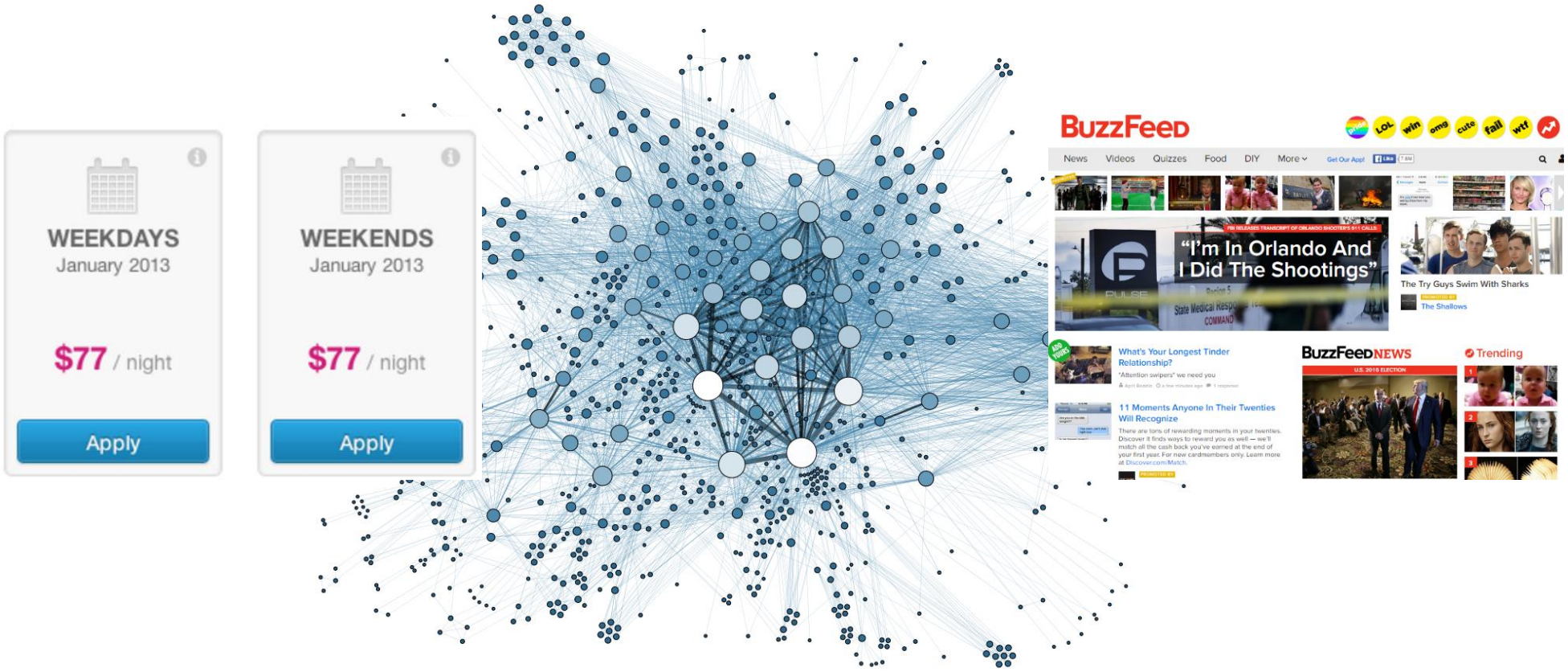
Definition of **AI**: a *branch of computer science trying to get computers to exhibit intelligence.*

- **Machine Learning** is a range of techniques for computers to perform cognitive functions
- **Deep Learning** (a type of Machine Learning that uses layers of neural networks) has been **the most accurate and productive** technique in AI research

Check out **Frank Chen of a16z**'s recent video on the subject.

WHAT DOES AI LOOK LIKE?

AI techniques will make every application smarter, faster, and better suited for our needs. Most of us already use deep learning and machine learning products every single day. Buzzfeed headlines, Airbnb suggested listing prices, and Facebook's M assistant all use deep learning and machine learning algorithms.

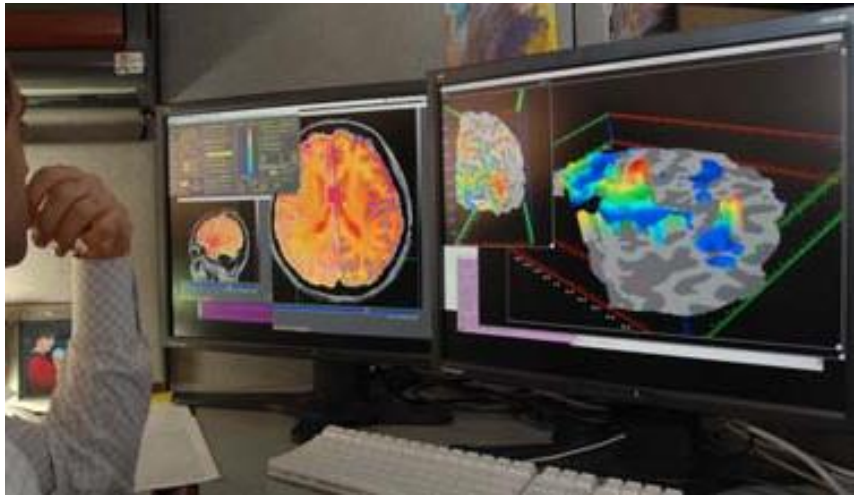


A FEW SUB-INDUSTRIES USING AI TECHNOLOGIES:

- Healthcare
- Business Intelligence
- Finance
- Cybersecurity
- Internet of Things
- Advertising, Sales & Marketing
- Autonomous Vehicles
- Personal Assistants/Productivity
- E-Commerce
- Agriculture
- Robotics
- Legal
- Education

EMERGING AI APPLICATIONS

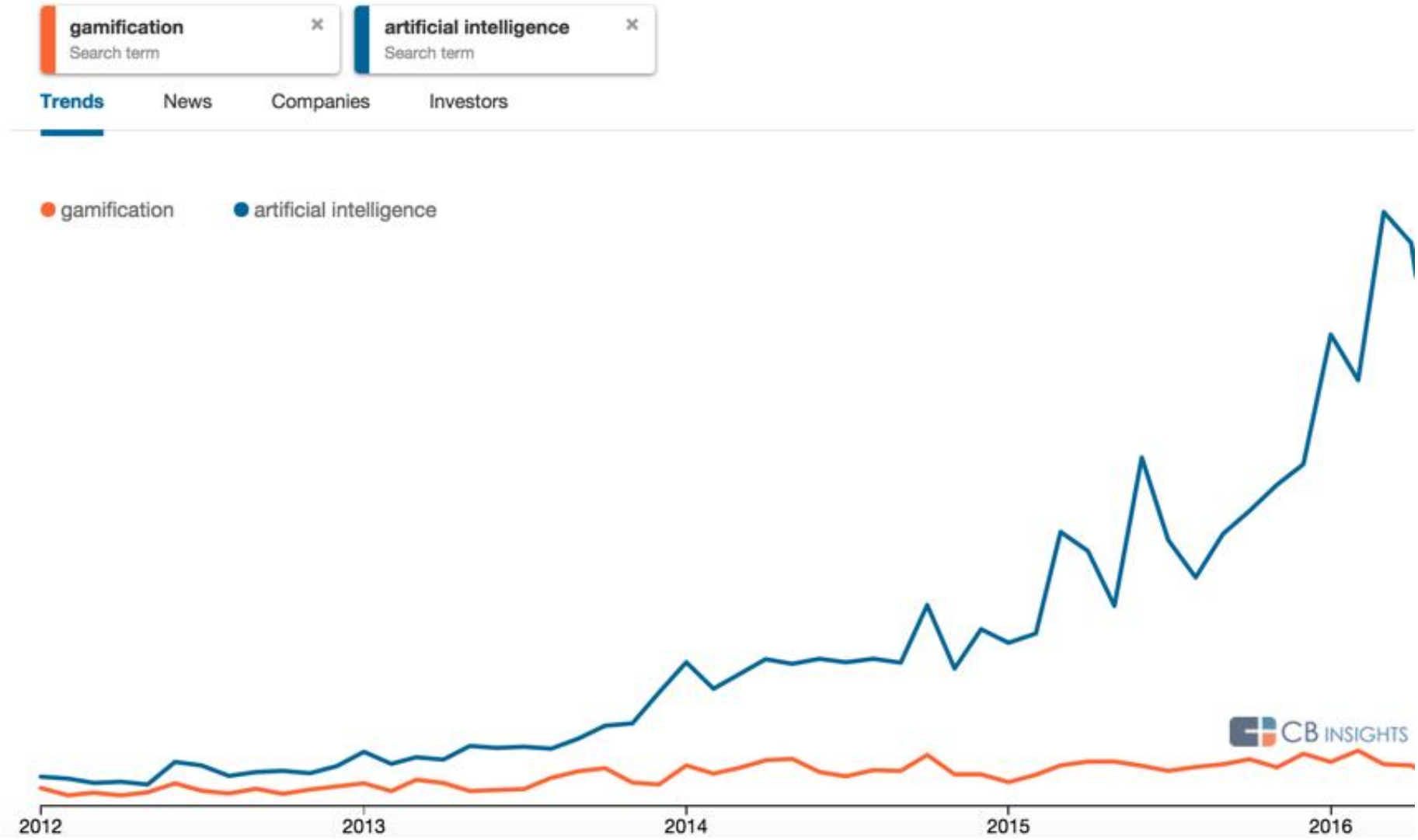




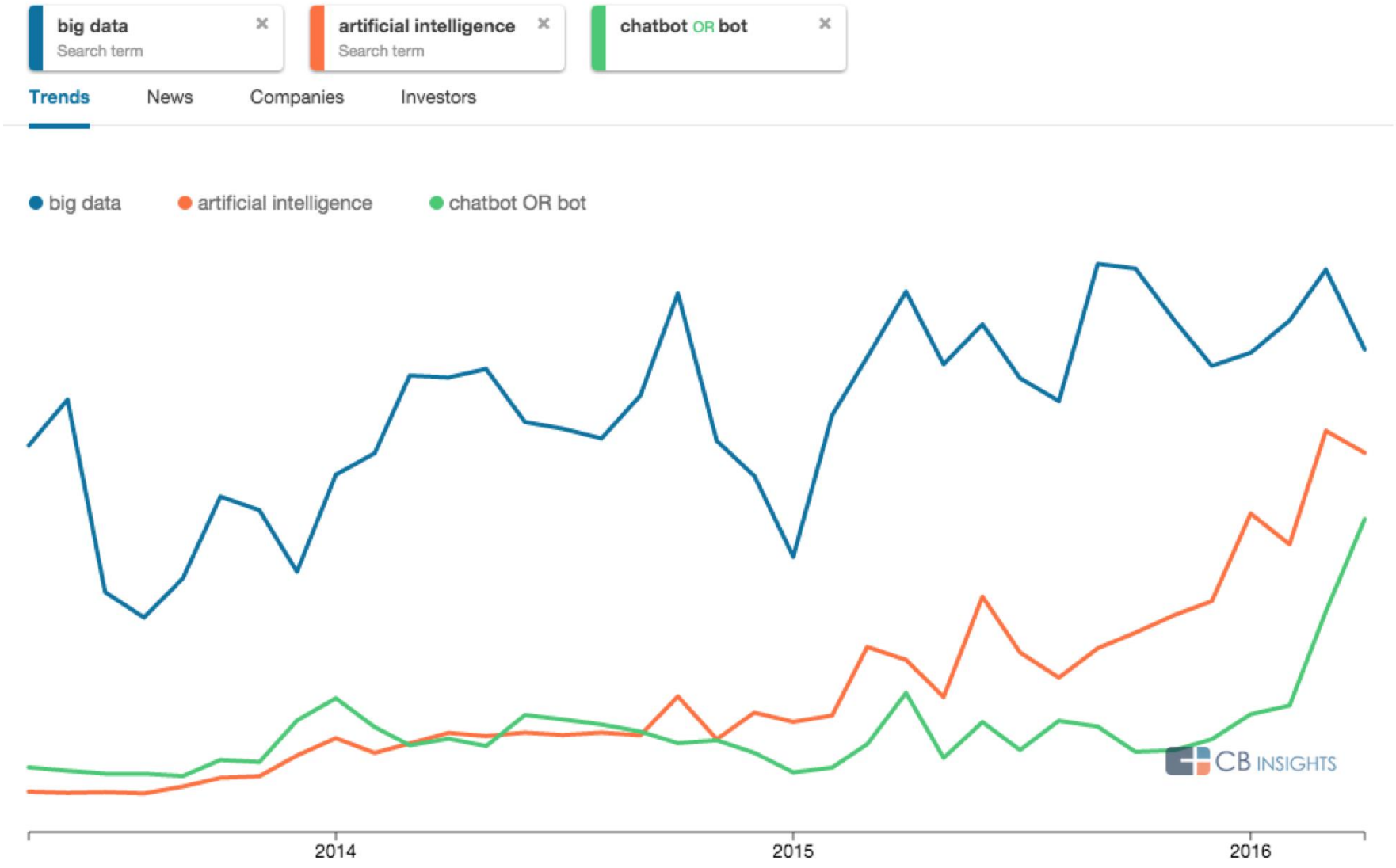




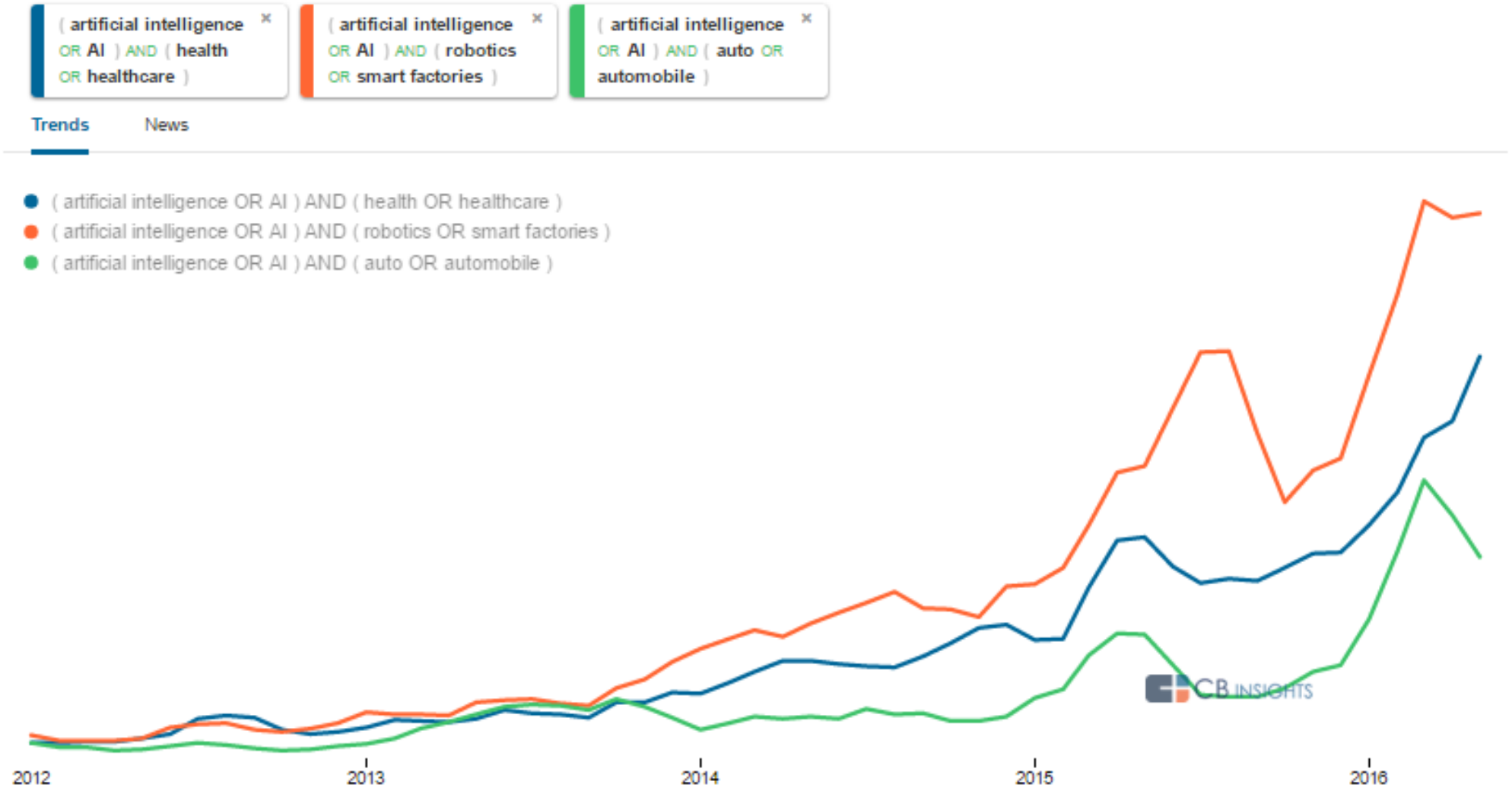
AI TRENDS


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Trends
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CB INSIGHTS
2012
2013
2014
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2016

AI TRENDS


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AI TRENDS

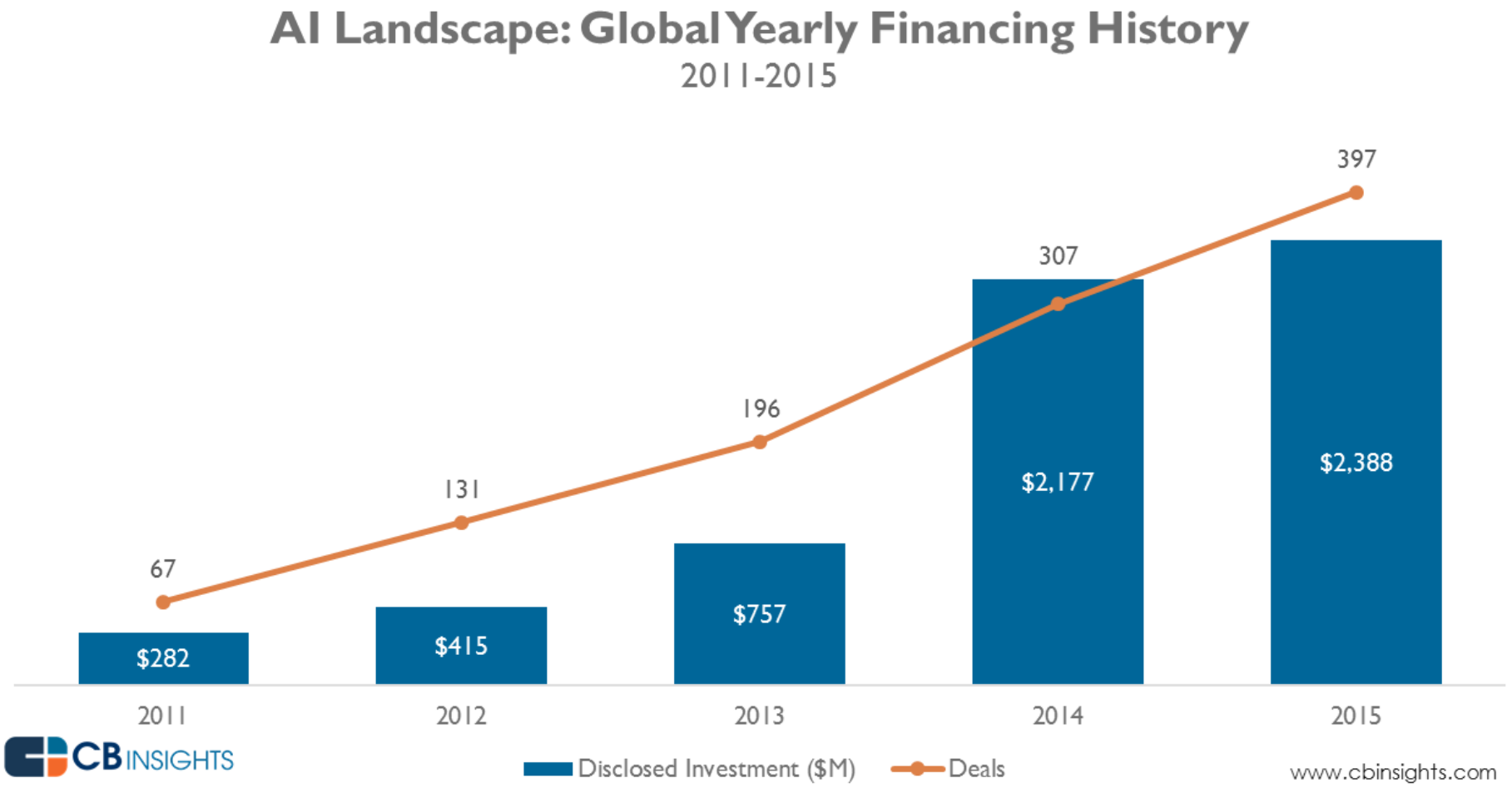

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THE AI
INVESTMENT
LANDSCAPE


Global artificial intelligence equity funding:
$6 BILLION
across
1,098 DEALS

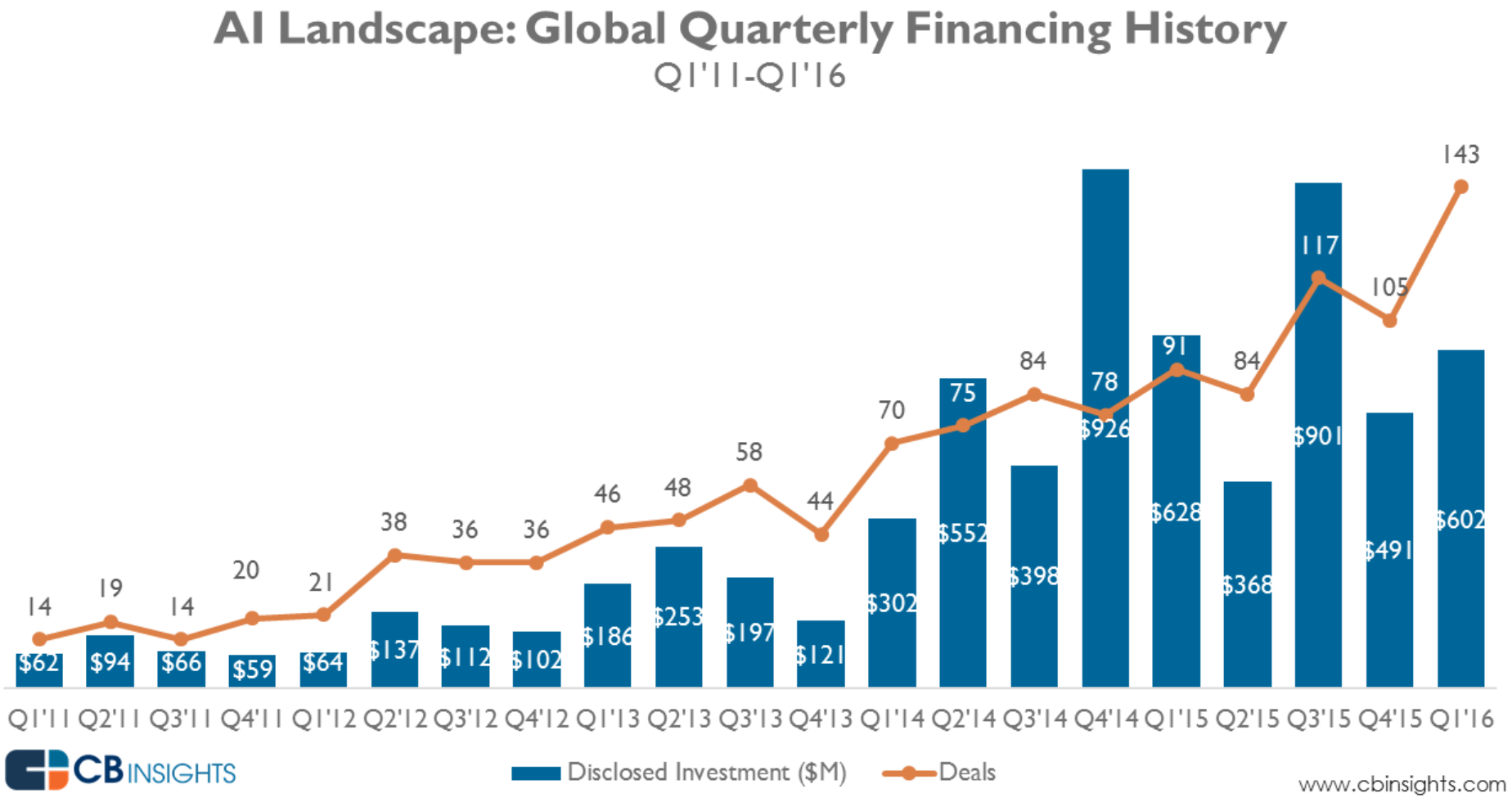
DEALS AND DOLLARS TO AI STARTUPS REACHED A NEW HIGH IN 2015

Equity financings to the AI space have gone from $282M in 2011 to $2.4B in 2015, a 746% increase in just 5 years.



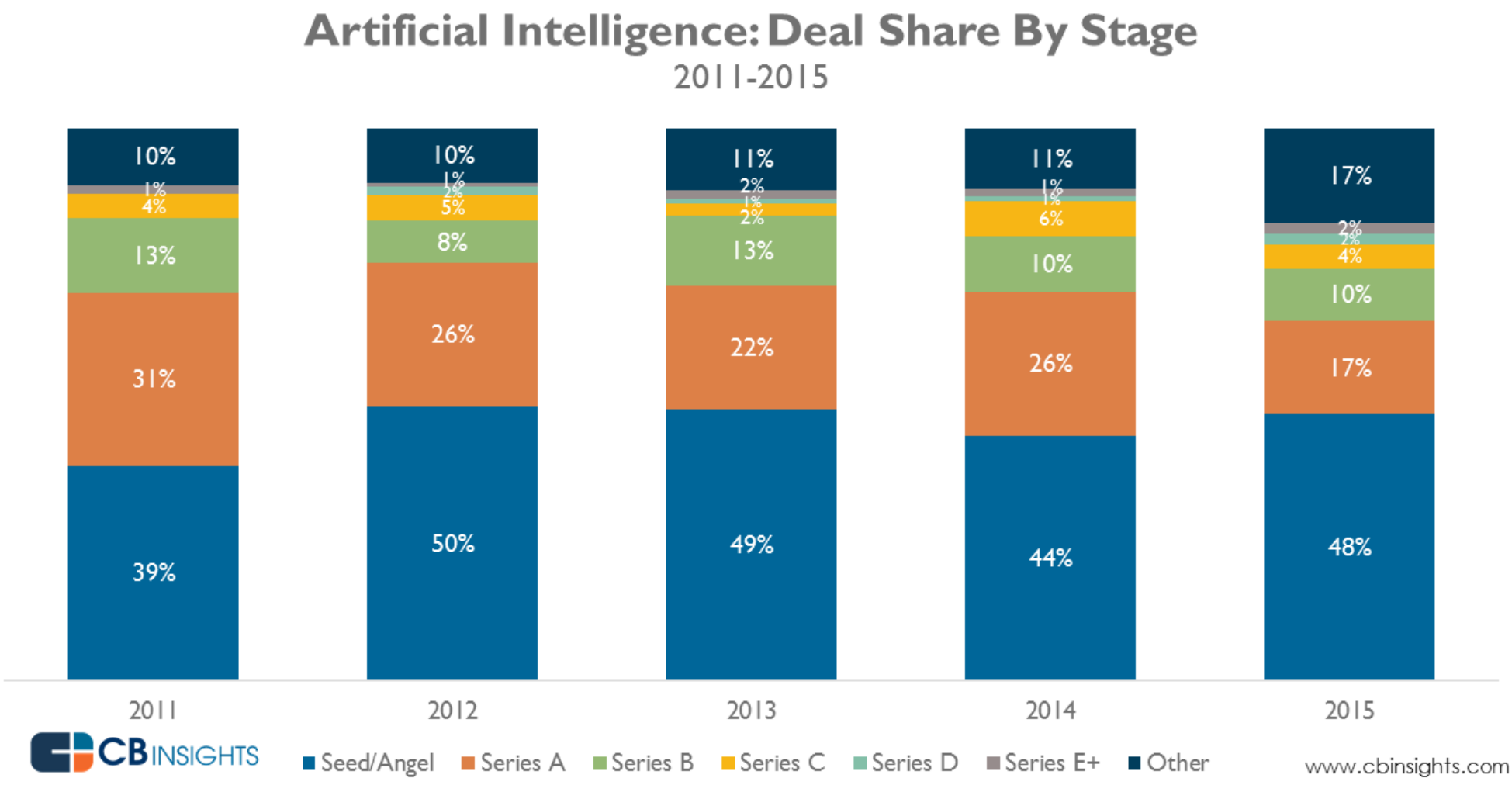
DEALS TO THE SPACE ARE INCREASING FAST

AI deals peaked in Q1'16 at 143, which translates to 36% growth quarter-over-quarter. Q4'14 and Q3'15, each saw huge tallies of more than $900M invested.



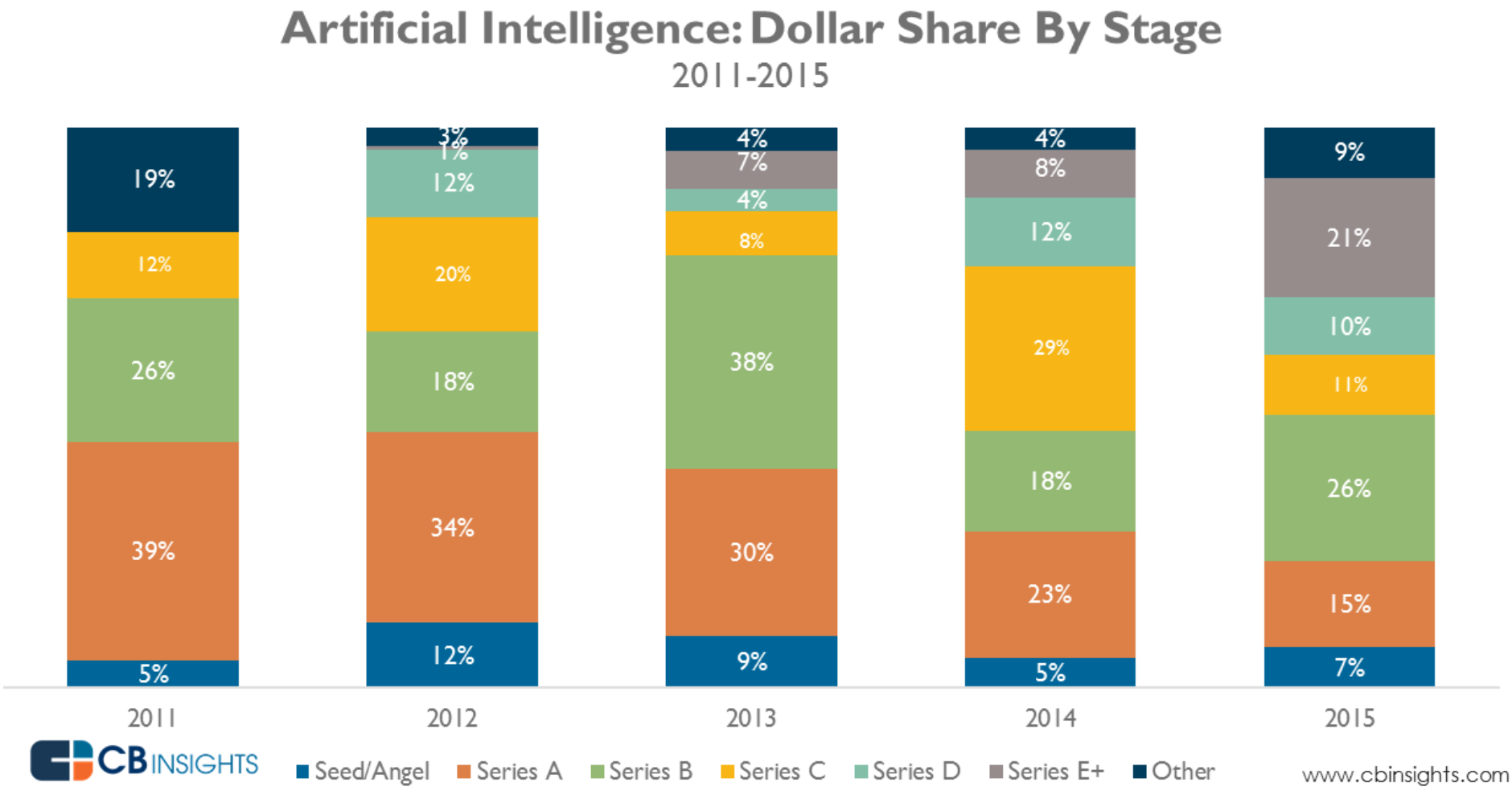
MAJORITY OF DEALS GO TO EARLY-STAGE STARTUPS

Early stages saw the majority of deals over the past 5 years, though the figure is retreating slightly as the industry matures. In 2011, 70% of deals were seed or Series A, whereas now it's 65%.



MIDDLE-STAGE STARTUPS RECEIVED MOST FUNDING

While AI deals skew toward the early stage, it's middle-stage deals (Series B and Series C) that have generally seen the most dollars invested.



KHOSLA VENTURES EMERGES AS MOST ACTIVE VC INVESTOR

Venture capital firms have been actively investing AI startups. The rankings below are based on unique horizontal and vertical AI companies invested in from 2011 to 2016 year-to-date.

1 khosla ventures

2 intel Capital

2 Data Collective

4 GV

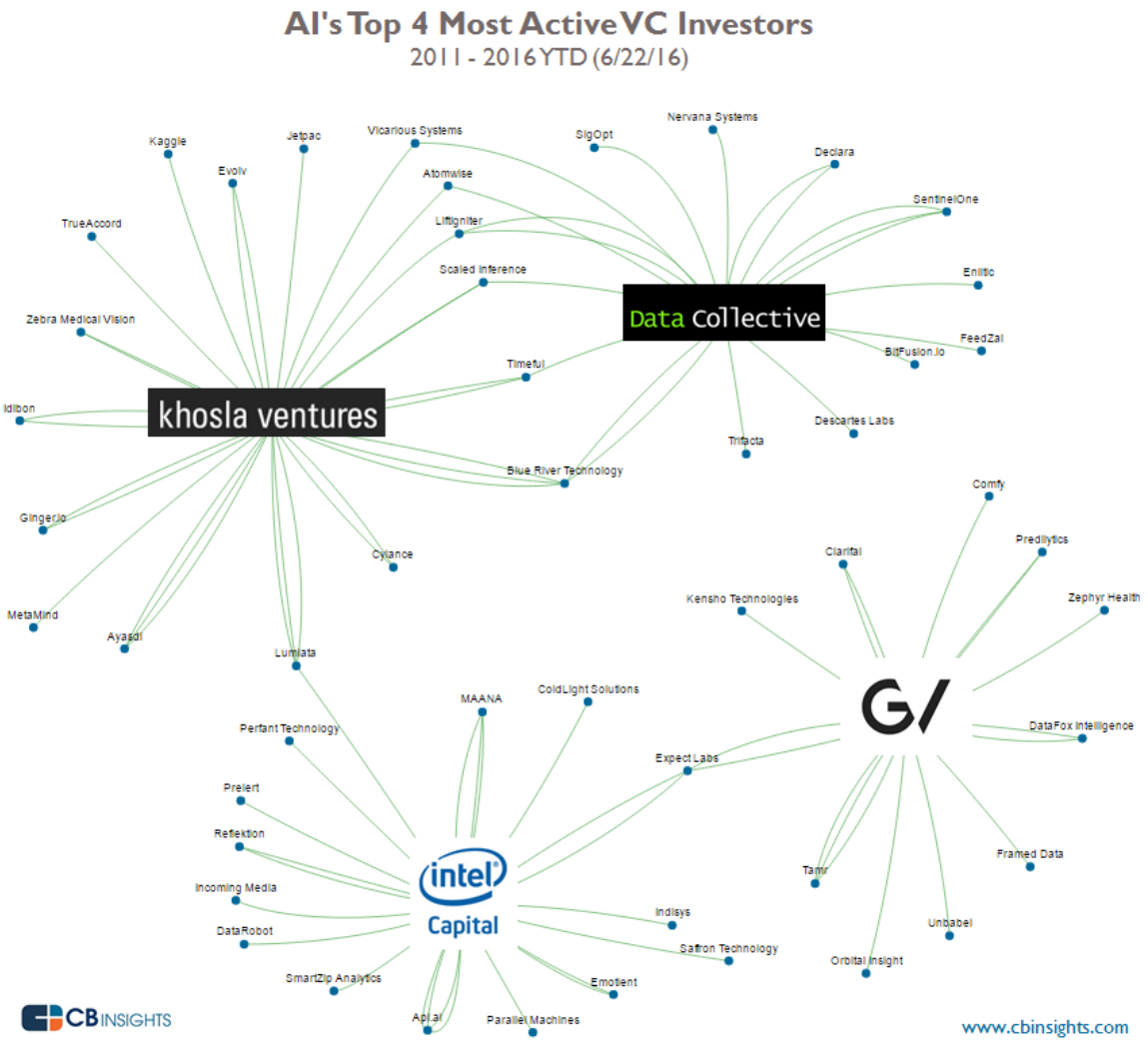
Artificial Intelligence: Most Active VC Investors
2011 to 2016 year-to-date (as of 6/15/2016)

Rank	Investors
1	Khosla Ventures
2	Intel Capital
2	Data Collective
4	Google Ventures
5	New Enterprise Associates
5	Andreessen Horowitz
5	Formation 8
5	Horizons Ventures
5	Accel Partners

MOST ACTIVE VC INVESTORS

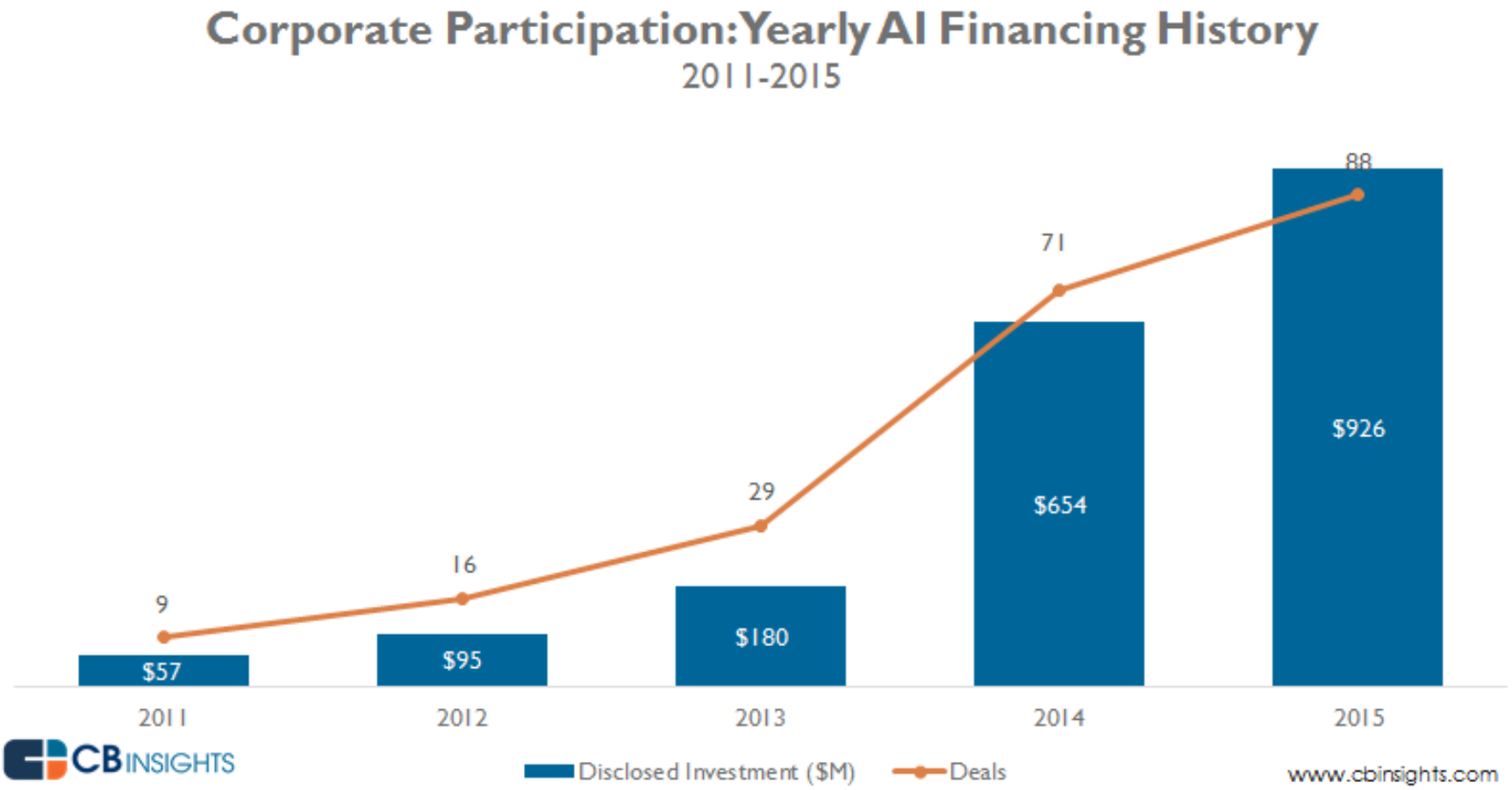
The Business Social Graph helps visualize connections between startups and investors. Data Collective and Khosla Ventures share many portfolio companies including Vicarious and Timeful.

The Business Social Graph



CORPORATE INTEREST IN ARTIFICIAL INTELLIGENCE STARTUPS RISING

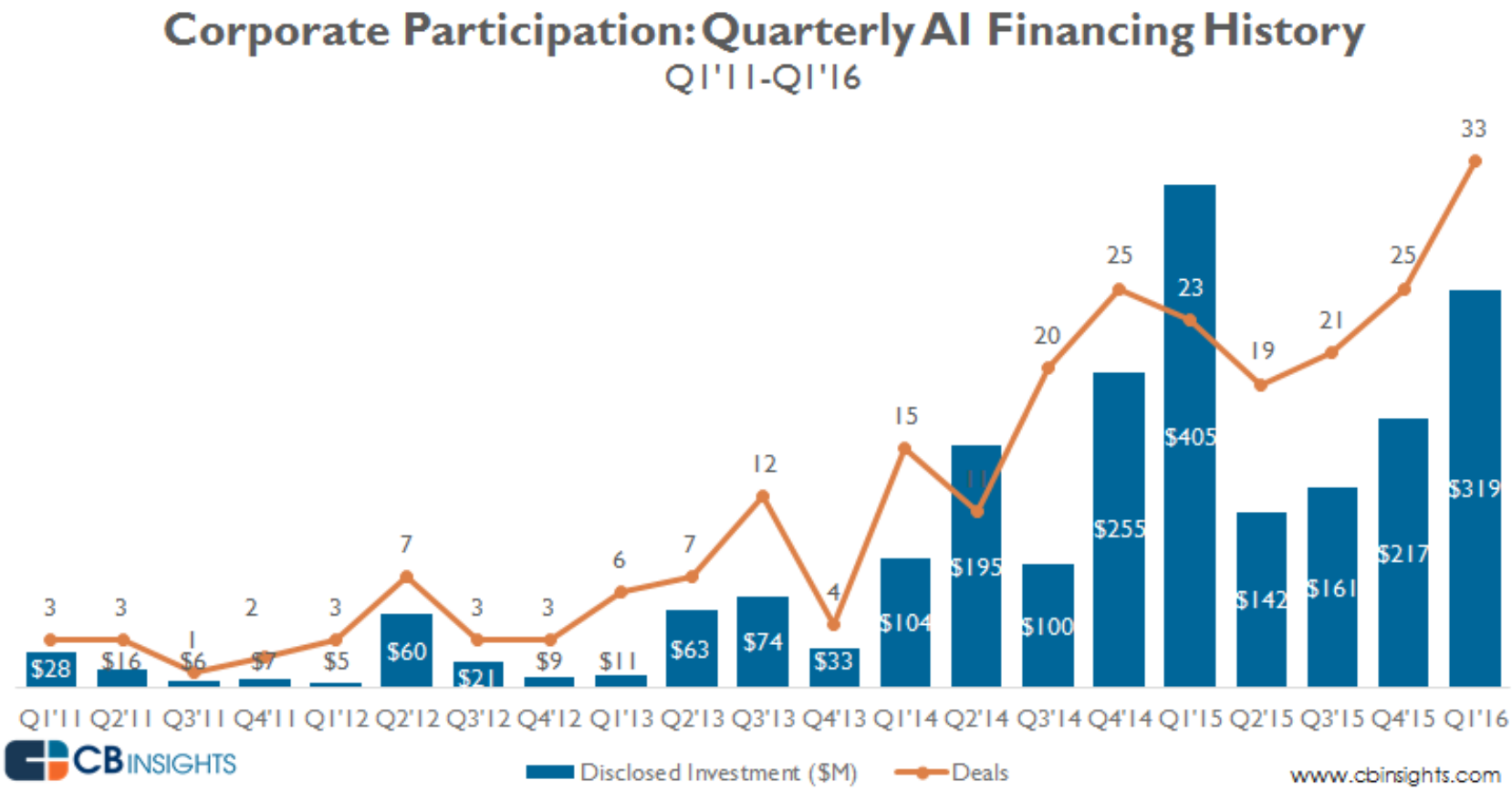
Corporate-backed deals and dollars reached a new high in 2015, with $926M invested across 88 deals. Some of the highest-funded rounds last year include a $117M Series E round raised by Taboola (backed by Advance Publications), a $60M Series D round raised by InsideSales.com (backed by Salesforce Ventures), and a $55M Series C round raised by Ayasdi (backed by Citi Ventures).



CORPORATE-BACKED DEALS REACHED NEW HIGH IN Q1’16

Q1'16 set a deals record for corporate-backed equity financing in artificial intelligence. Some of the highest funded rounds last quarter were raised by Digital Reasoning Systems (backed by NASDAQ, In-Q-Tel), and IBM Watson Group-backed Pathway Genomics.

The funding high in Q1'15 was driven by the previous-mentioned rounds raised by Ayasdi, Taboola, and InsideSales.com.



MOST ACTIVE CORPORATE INVESTORS

All top corporates investing in AI, unsurprisingly, are tech or data giants. Investment in the space likely offers strategic value to extract more from their data-driven core businesses.

Artificial Intelligence: Most Active Corporate Investors

2011-2016YTD (as of 6/15/2016)

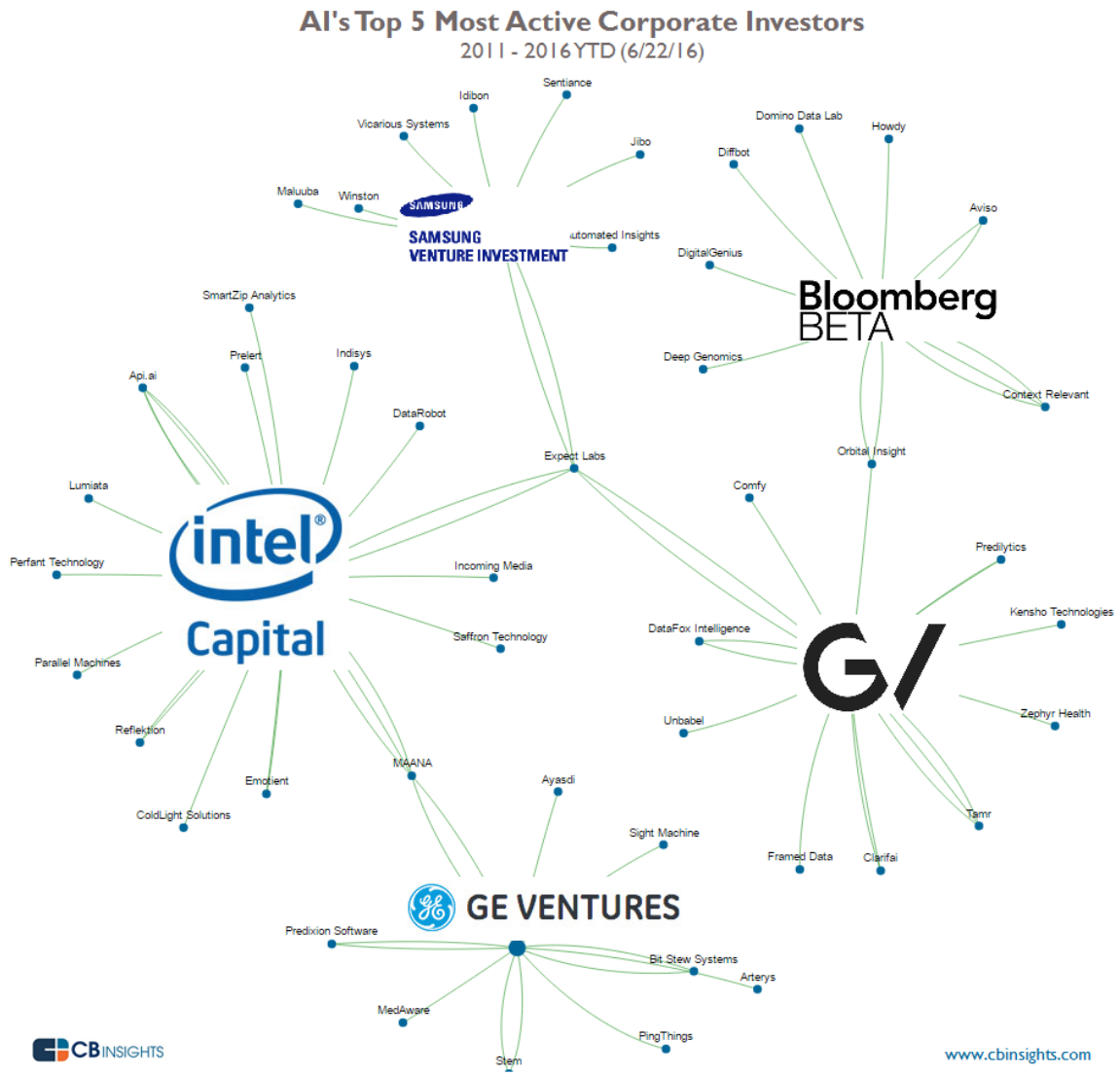
Investor	Rank	Select Investments
Intel Capital	1	DataRobot, prelert, lumiata, MAANA, incoming, saffron, PERFANT, emotient, Reflektion, Parallel Machines, MindMeld, smartzip, api.ai, indisys: Intelligent Dialogue Systems, COLDLIGHT
Google Ventures	2	BUILDING ROBOTICS, clarifai, KENSHO, FRAMED, ZEPHYR HEALTH, Unbabel, tamr, MindMeld, Orbital Insight, Predilytics
GE Ventures	3	SIGHT MACHINE Manufacturing Analytics, ARTERYS, AYASDI, BITSTEW SYSTEMS, MedAware Eliminating prescription errors, PingThings, stem, Predixion, MAANA
Samsung Ventures	4	vicarious, sentiance, MaluubA, IDIBON, jibo, MindMeld, AUTOMATED INSIGHTS
Bloomberg Beta	4	deep genomics, context relevant, AVISO, howdy., DOMINO, Orbital Insight, DigitalGenius, DIFFBOT

Source: https://www.cbinsights.com/blog/most-active-corporate-investors-artificial-intelligence/

MOST ACTIVE CORPORATE INVESTORS

Expect Labs saw investment from Intel, Google, and Samsung's venture arms.

The Business Social Graph



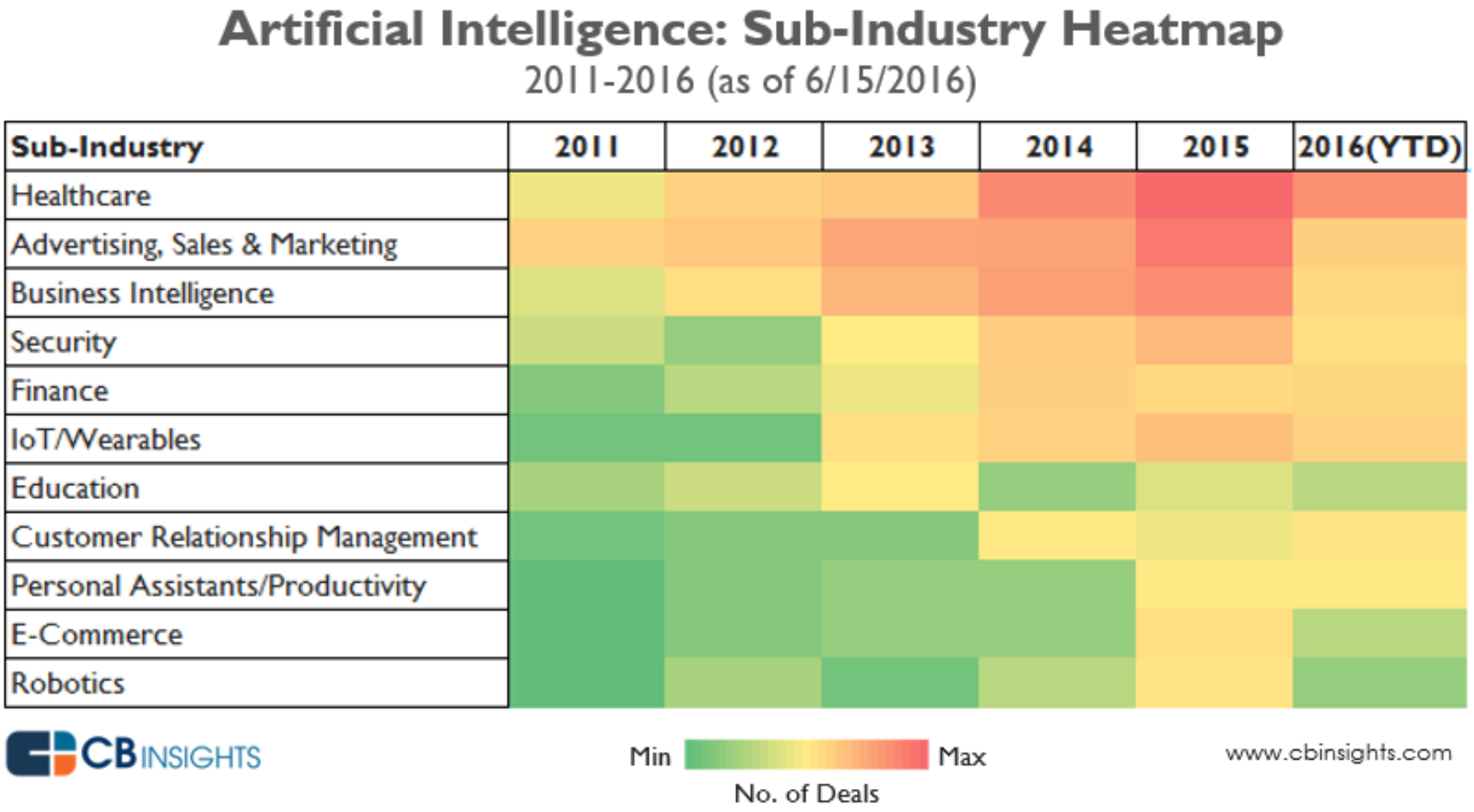

WHAT AREAS ARE HOT?

THE MOST WELL-FUNDED CORE AI COMPANIES

Company	Total Funding ($M)	Description
sentient	$144M	AI platform that employs deep learning to a number of verticals.
AYASDI	$98M	Uses machine learning algorithms to analyze risk in banks, and has also applied the technology to extract insights from healthcare datasets.
Digital Reasoning	$76M	Machine learning platform for data.
vicarious	$67M	Develops machine learning software for cognitive tasks that mimic the human brain.
DataRobot	$57M	Machine learning platform for predictive modeling.

HEATMAP OF DEAL SATURATION

One of the top areas for deals has been Healthcare, Ads, BI, Cybersecurity, and Finance.



Source: https://www.cbinsights.com/blog/artificial-intelligence-investment-heatmap/



HEALTHCARE

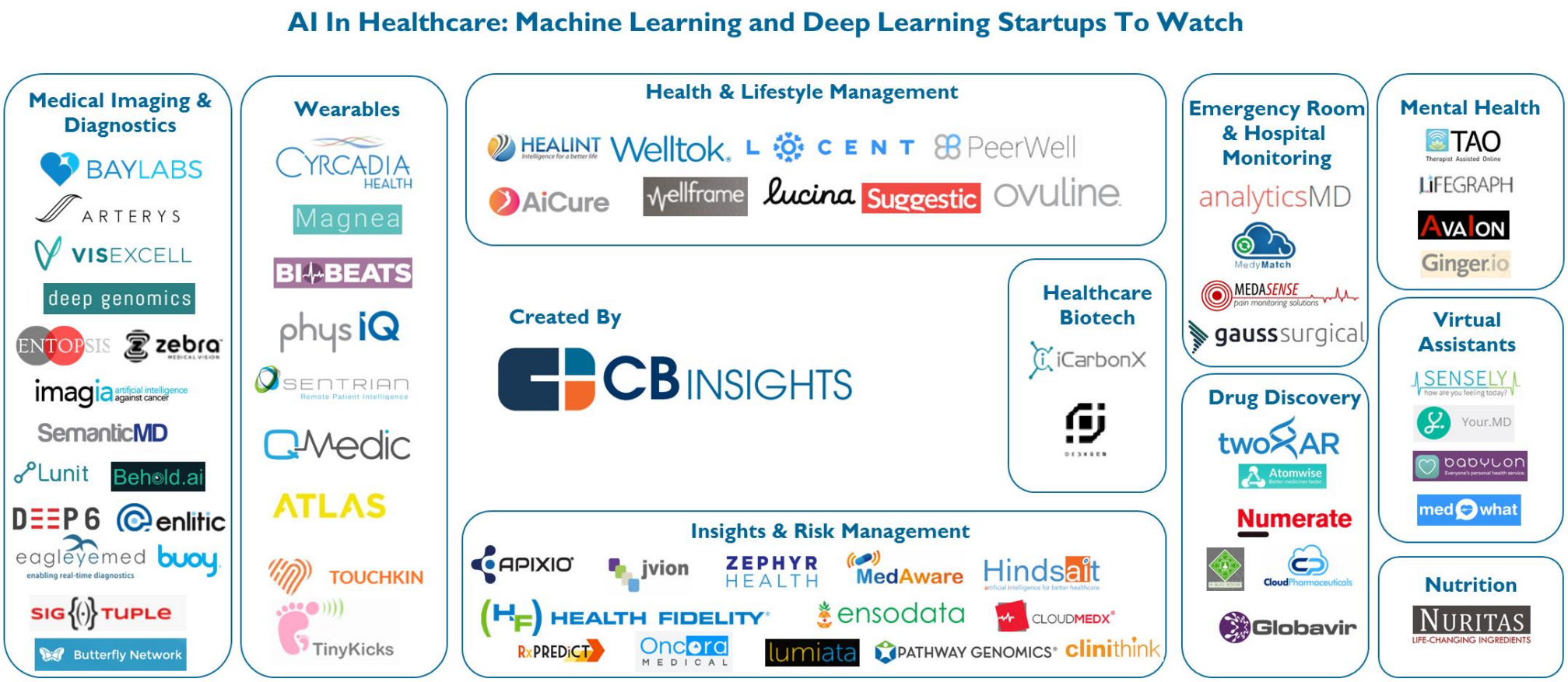
“I don’t think any physician today should be practicing without artificial intelligence assisting in their practice. It’s just impossible (otherwise) to pick up on patterns, to pick up on trends, to really monitor care.”

Bernard Tyson
CEO, Kaiser Permanente



Image Source: Fortune

AI HEALTHCARE MARKET MAP



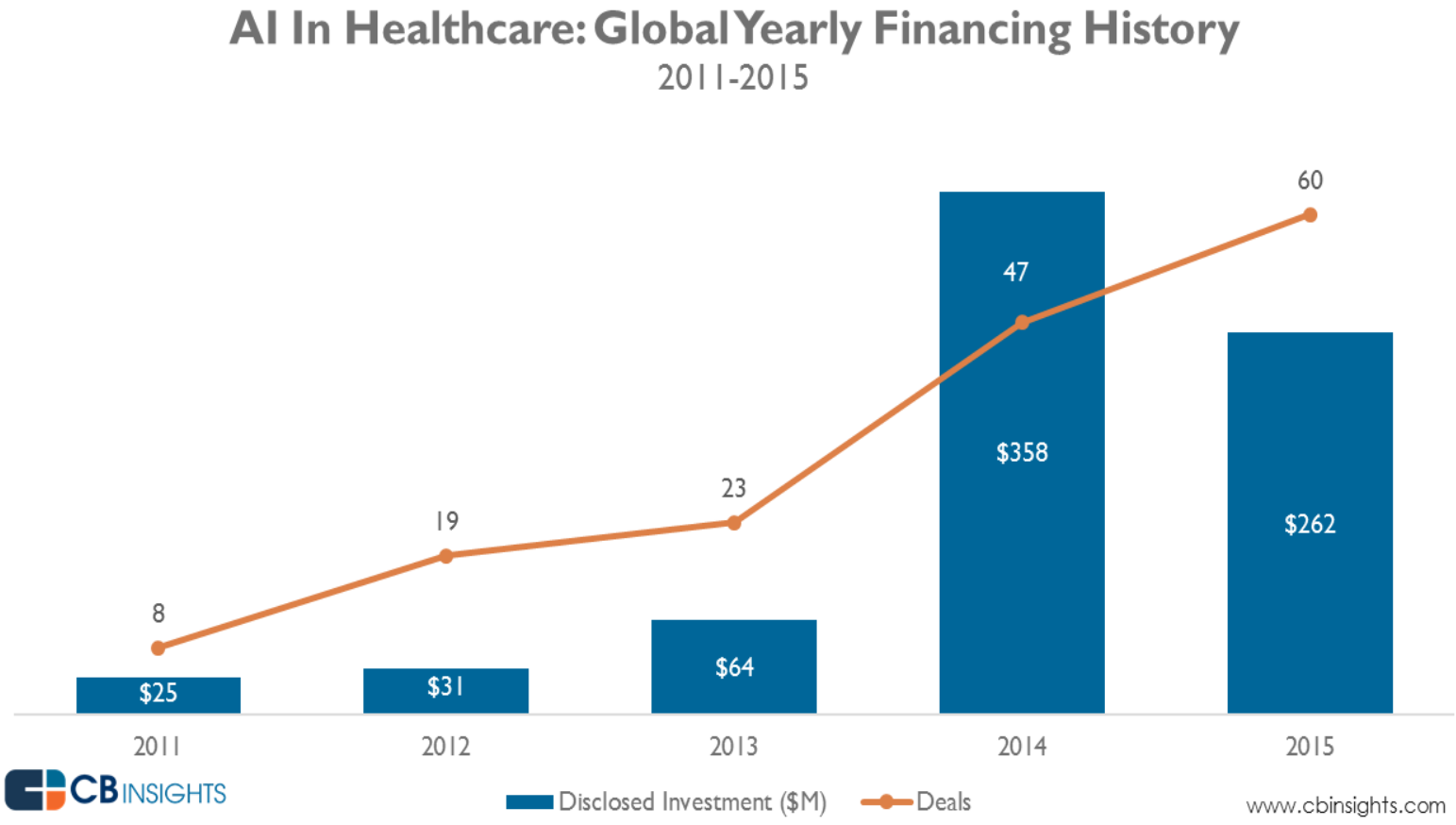
Source: https://www.cbinsights.com/blog/artificial-intelligence-startups-healthcare/

THE MOST WELL-FUNDED AI COMPANIES IN HEALTHCARE

Company	Total Funding ($M)	Description
Welltok	$192M	Health management platform and social network to improve health outcomes.
iCarbonX	$154M	AI platform for facilitating research, treatment, preventative care, and nutrition.
Stratified Medical	$141M	Applies AI to improve efficiency of pharmaceutical R&D process.
Butterfly Network	$100M	High-performance ultrasound imaging that employs deep learning algorithms.
APIXIO	$42M	Analyzes clinical data and patient charts.

HEALTHCARE AI YEARLY DEALS AND DOLLARS

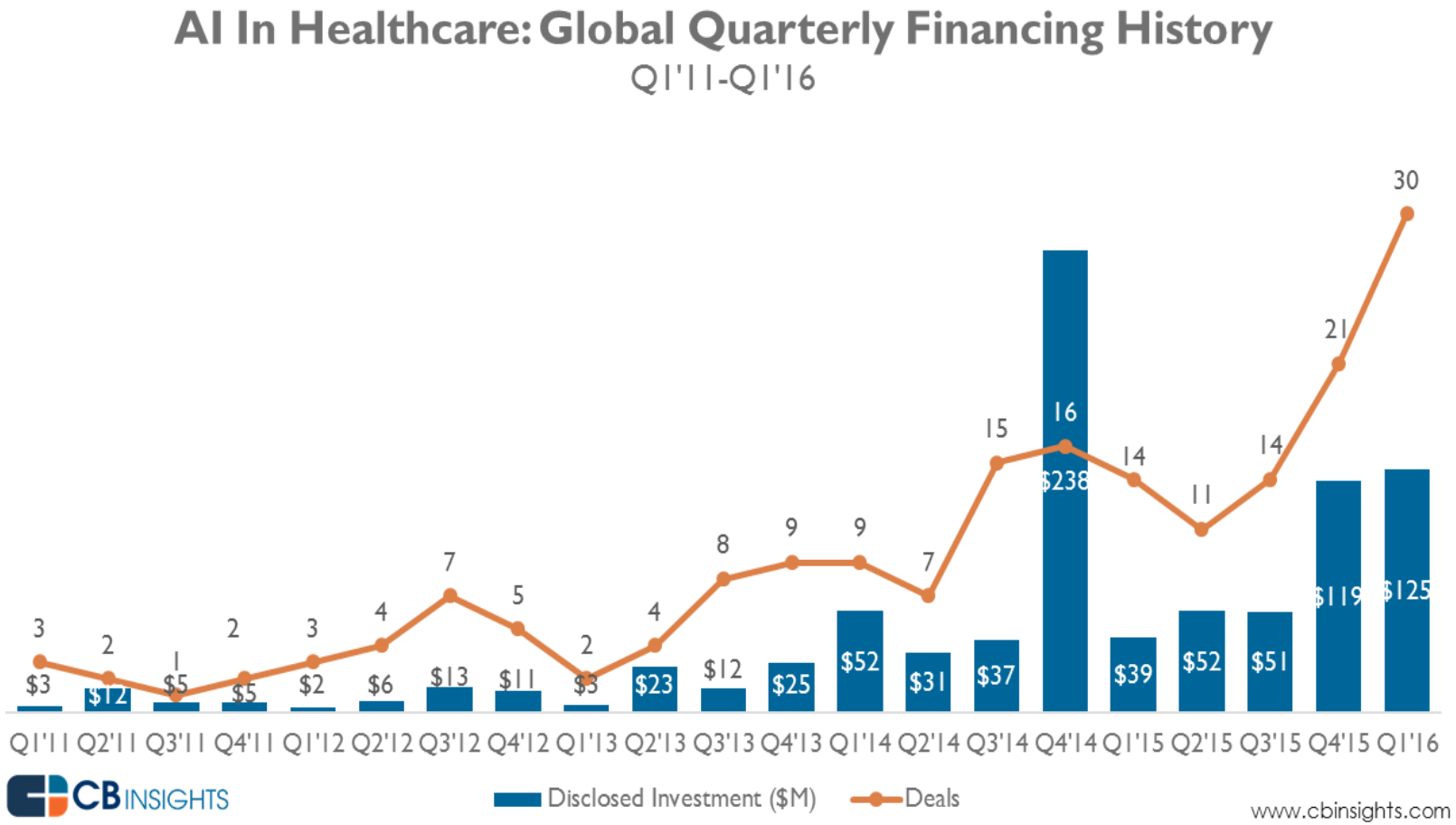
Deals to healthcare-related AI companies have been increasing year-or-year since 2011, with deals more than doubling in 2014, and more tapered growth in activity in 2015. Funding jumped by nearly 460% in 2014, to $358M from $64M in 2013. This funding jump was driven by Butterfly Network's $100M Series C round and Stratified Medical's round of $64M. In comparison, the largest round in 2013 was for less than $20M.



Source: /https://www.cbinsights.com/blog/artificial-intelligence-healthcare-startups-funding-trends

HEALTHCARE AI QUARTERLY DEALS AND DOLLARS

Deals reached a new high of 30 in Q1’16, breaking the previous quarter’s record of 21. Funding did not see a similar run-up, indicating that many of the deals in Q1’16 were for relatively small amounts. The funding peak in Q4’14 was driven by the previously-mentioned rounds to Butterfly Network and Stratified Medical.

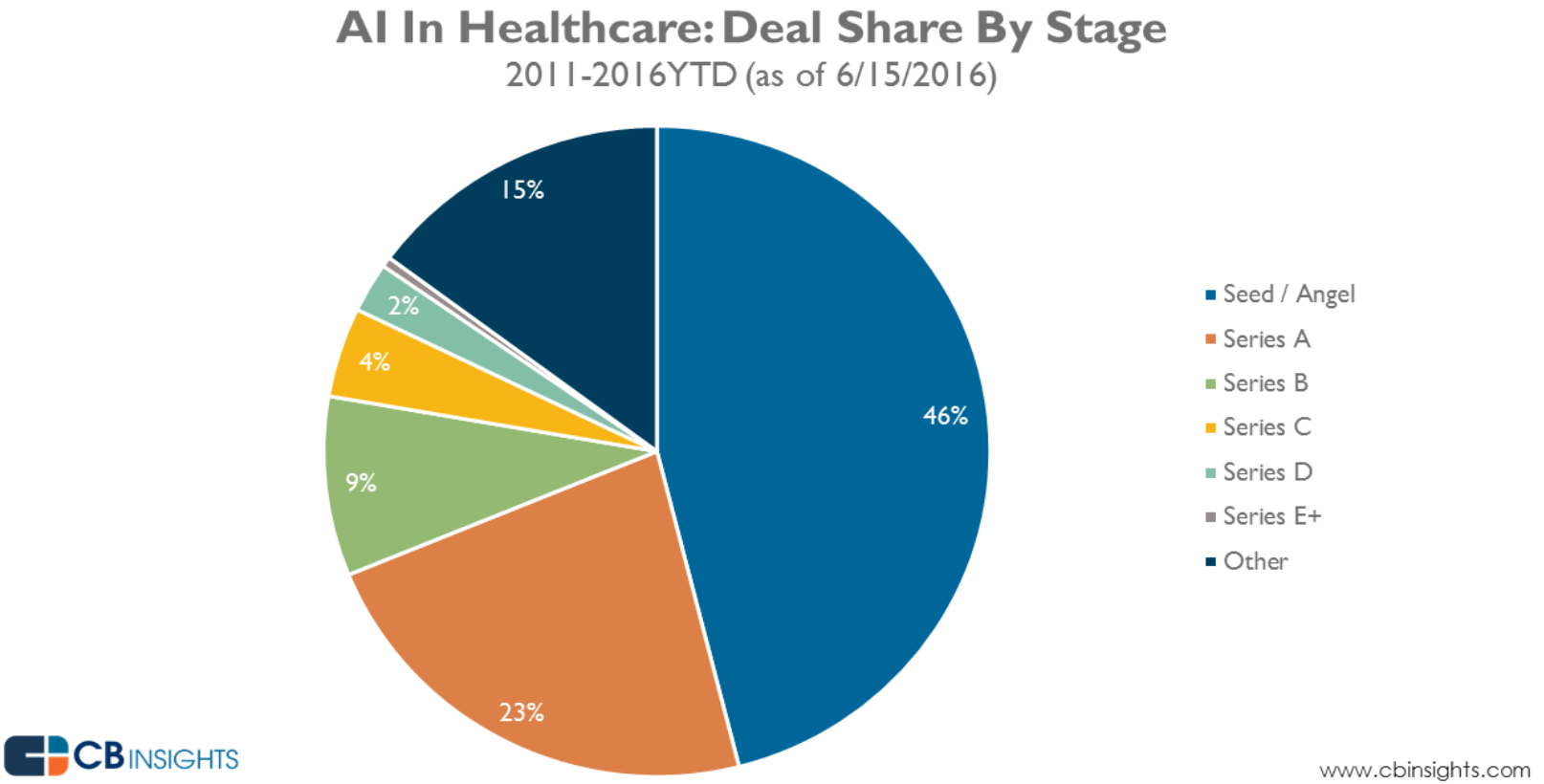


Source: /https://www.cbinsights.com/blog/artificial-intelligence-healthcare-startups-funding-trends

AI HEALTHCARE DEALS BY STAGE

New startups are clearly venturing into this space, with more than 20 AI-based healthcare-focused companies raising seed/angel funds in 2015, compared to less than 5 in 2011. Overall, seed/angel deals dominated with a 46% share of deals during the last 5 years, followed by Series A deals at 23%.

Some of the late-stage startups in this space include Pathway Genomics, WellTok, and Apixio.

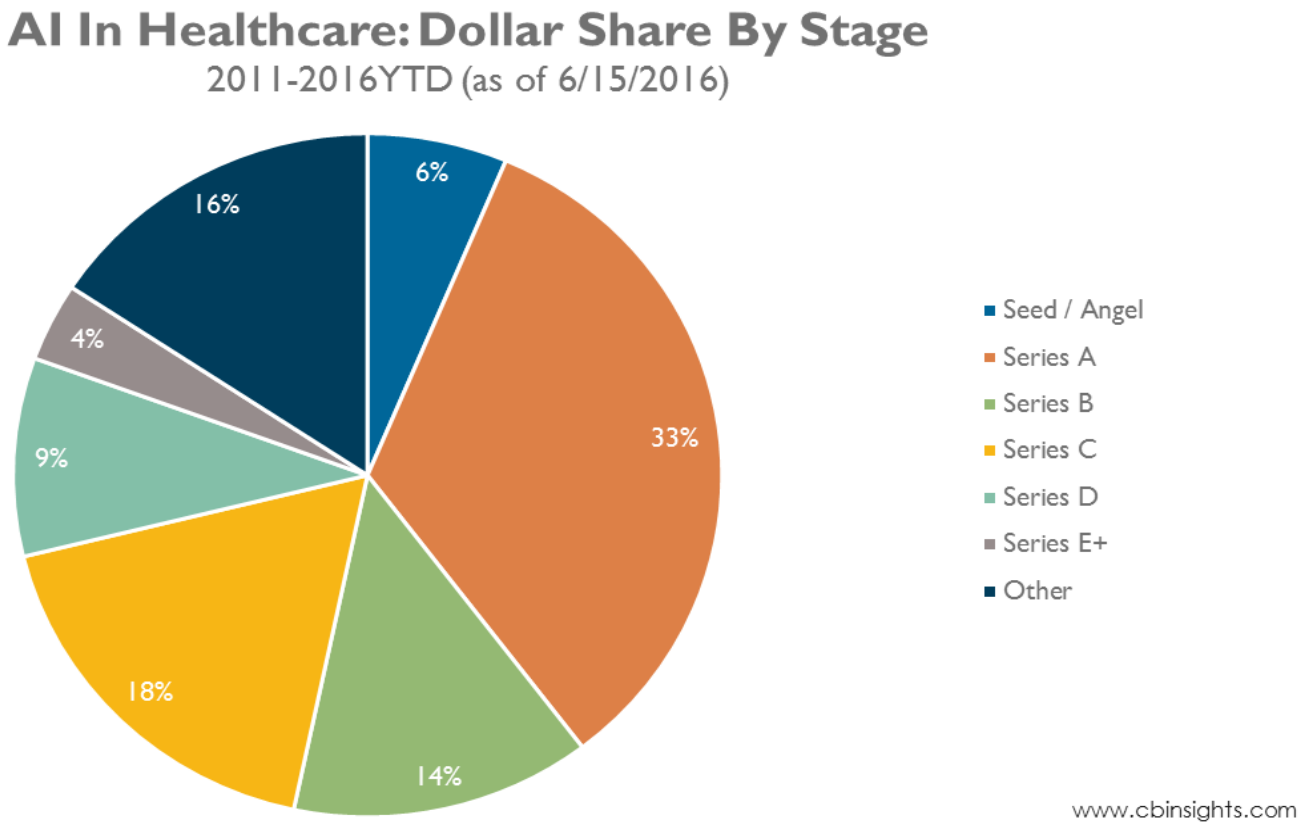


Source: /https://www.cbinsights.com/blog/artificial-intelligence-healthcare-startups-funding-trends

AI HEALTHCARE FUNDING BY STAGE

Startups raising Series A rounds received the largest share of funding, 33%. The largest Series A round was raised by China's iCarbonX in Q2'16 ($154M), which is backed by Tencent and VCANBIO.

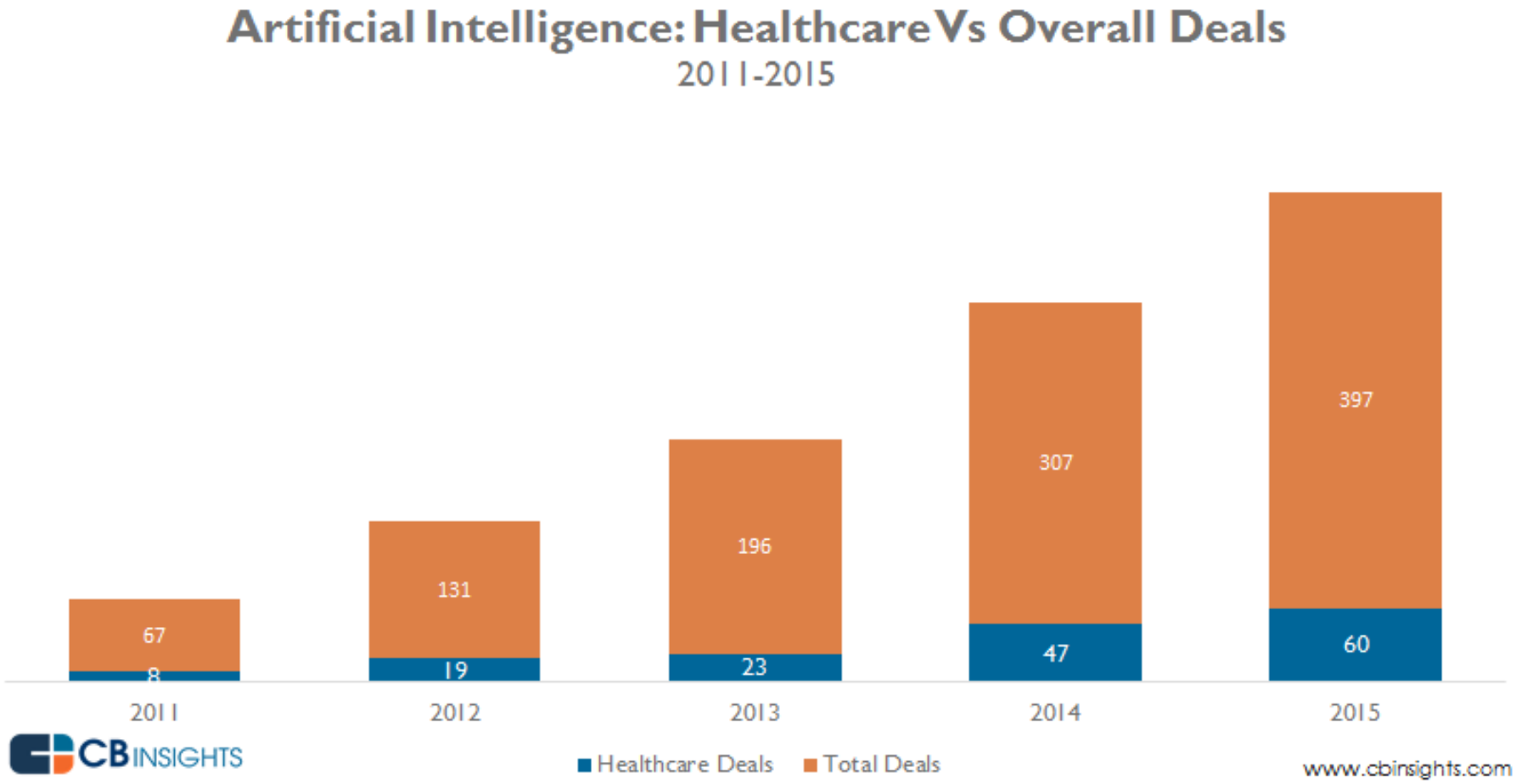
Mid-stage startups raising Series B and C rounds accounted for 32% of total dollar funding to the space, though mid-stage deals constituted just 13% of the total deals to the space



Source: /https://www.cbinsights.com/blog/artificial-intelligence-healthcare-startups-funding-trends

HEALTHCARE VS OVERALL AI DEALS

As a percentage of total deals to startups using artificial intelligence tech, healthcare increased gradually from 11% in 2011 to 15% last year.



Source: https://www.cbinsights.com/blog/artificial-intelligence-healthcare-startups-funding-trends


OTHER HOT AREAS

THE MOST WELL-FUNDED AI COMPANIES IN ADS, SALES, AND MARKETING

Company	Total Funding ($M)	Description
INSIDESALES.COM	$199M	Predictive sales analytics platform.
Lattice	$70M	Predictive marketing and sales software.
[PERSADO]	$66M	Cognitive content generation platform.
ScribbleLIVE	$59M	Content marketing platform.
Kahuna	$58M	Marketing and communication automation for mobile.

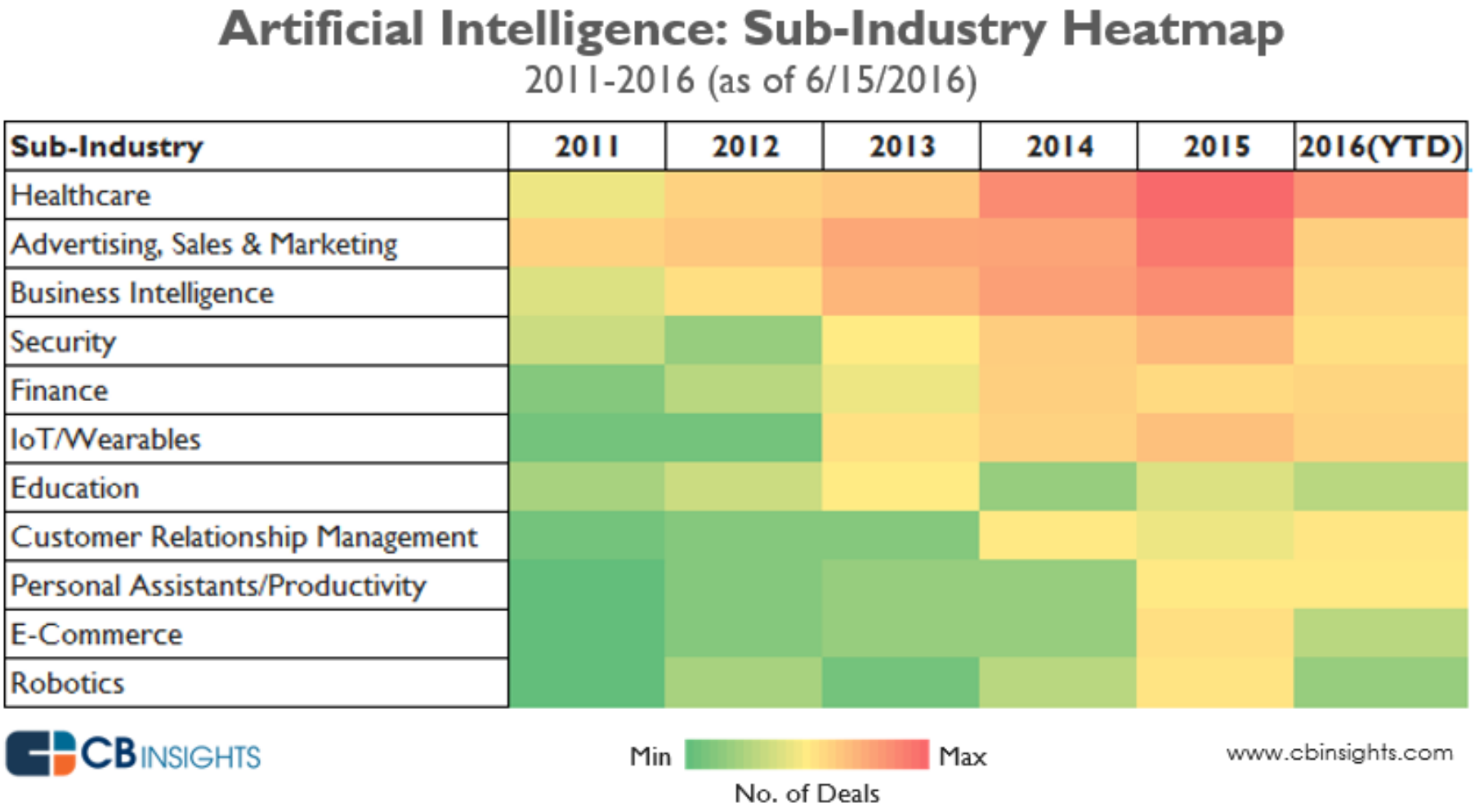
THE MOST WELL-FUNDED AI COMPANIES IN B.I.

Company	Total Funding ($M)	Description
ATTENSITY	$128M	Customer insights NLP and sentiment analysis.
Fractal	$125M	Analyzes text for customer insights.
NETBASE	$95M	Social media sentiment analysis tools.
TRIFACTA	$76M	Big Data services for a variety of industries.
blueyonder	$75M	Big Data services for a variety of industries.


WHERE AI IS
GOING

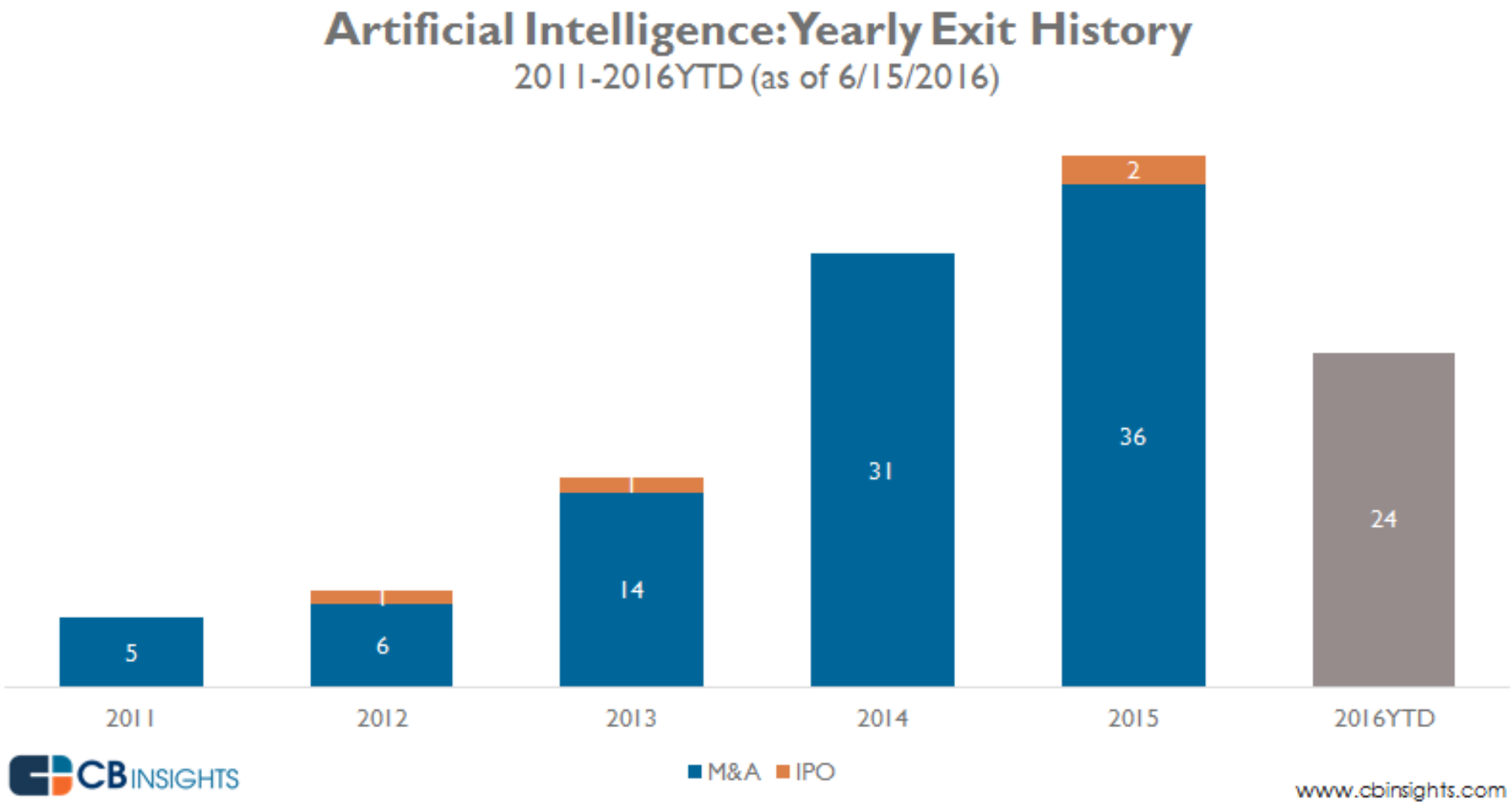
HEATMAP OF DEAL SATURATION

E-commerce and education are areas where deal volume has been relatively light. CRM and personal assistants have seen an increasing amount of activity.



AI EXITS: M&A ACTIVITY INCREASES 7X

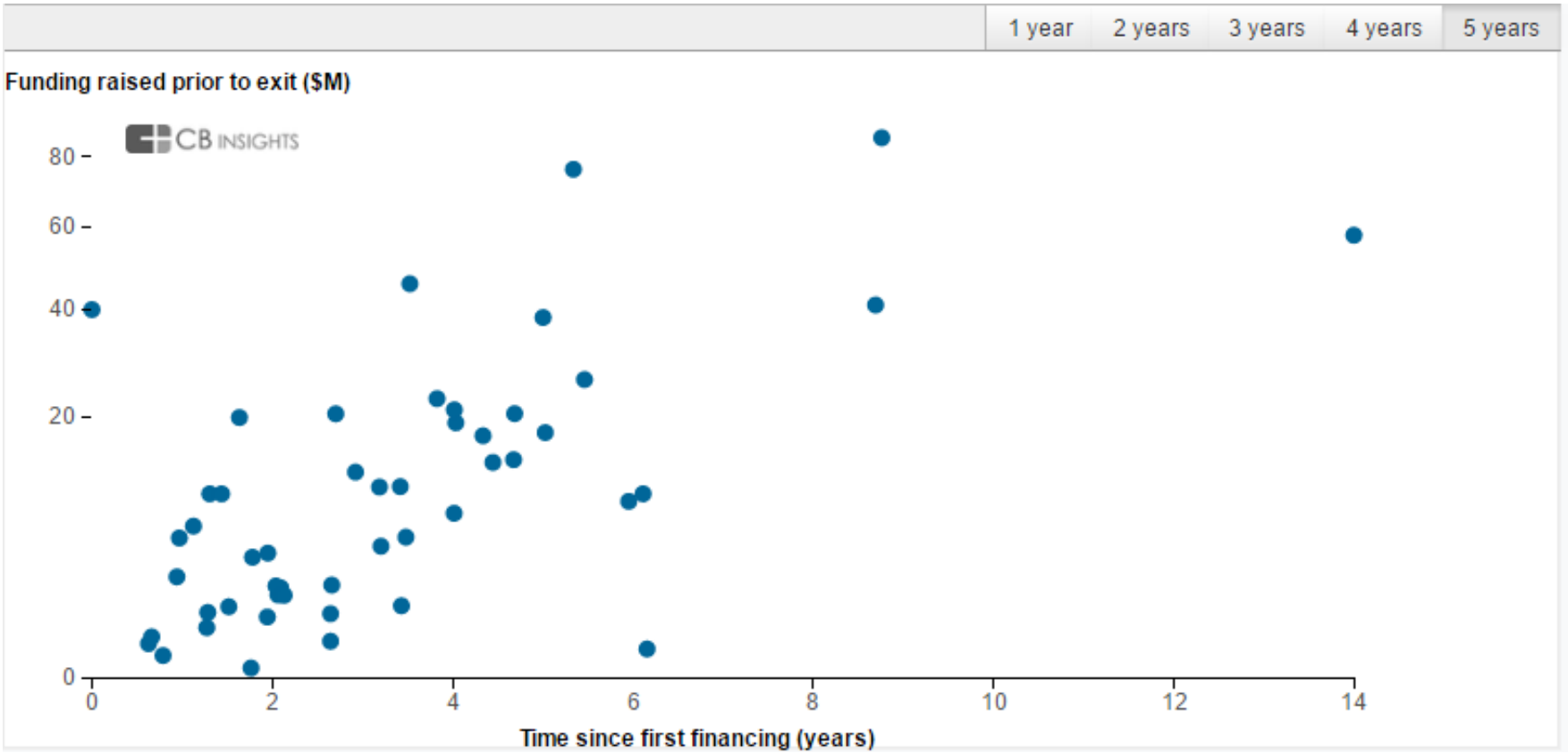
AI is on track to have a record year for exits, on top of a record-breaking 2015 that saw 2 IPOs among 38 overall exits.



Source: https://www.cbinsights.com/blog/artificial-intelligence-mergers-acquisitions-exits/

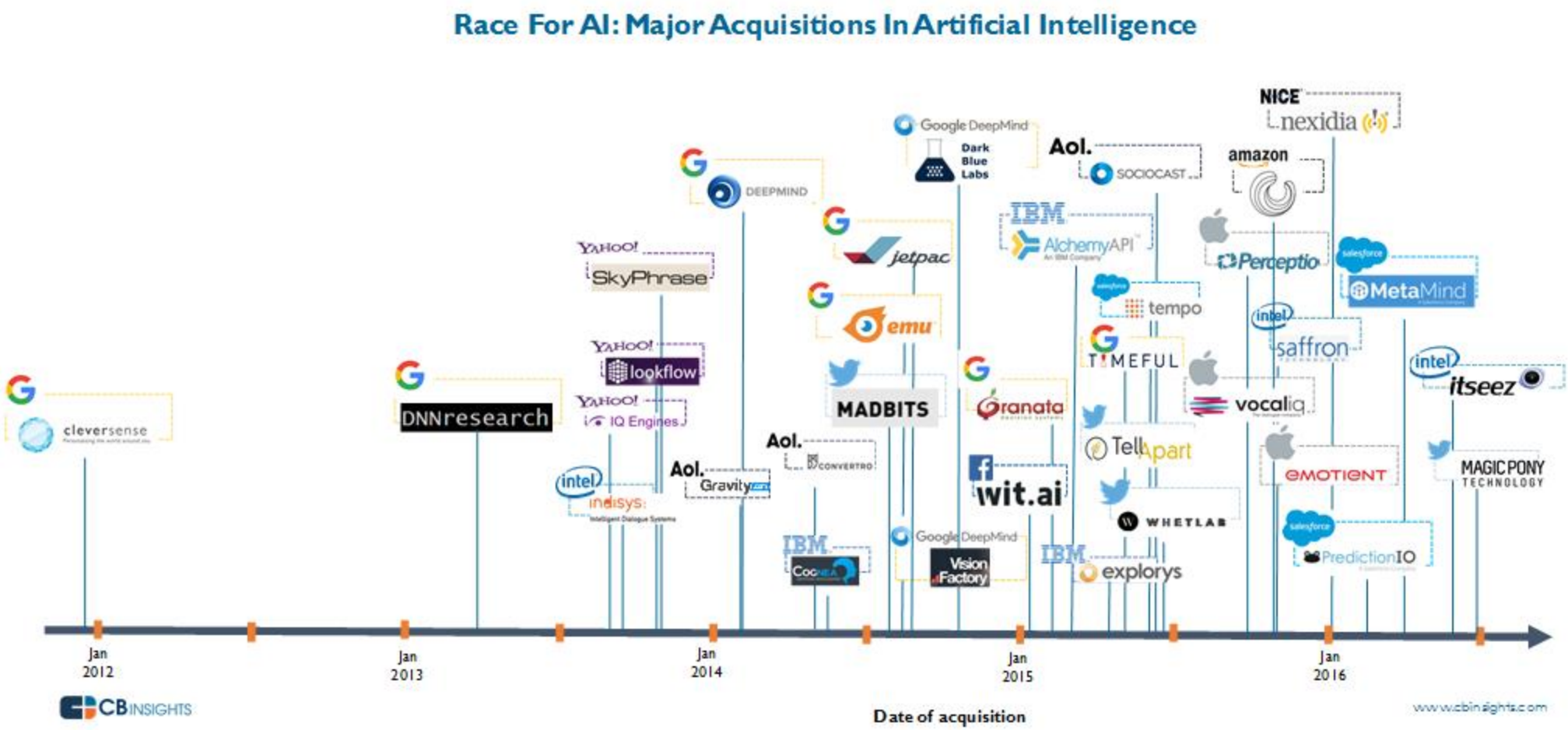
AI STARTUPS ARE SNAPPED UP EARLY

Most AI companies are acquired within 4 years of their first financing.



Source: https://www.cbinsights.com/blog/artificial-intelligence-mergers-acquisitions-exits/

TIMELINE OF MAJOR ACQUISITIONS



*Exact date of Orbeus acquisition not disclosed

NOTABLE AI NEWS

Date	Headline
January 27, 2016	Google achieves AI 'breakthrough' by beating Go champion
April 4, 2016	George Hotz's Self-Driving Car Startup Gets $3.1 Million Investment Led By A16z
May 9, 2016	Here's the first demo of Viv, the next-generation AI assistant built by Siri creator
June 18, 2016	FACEBOOK IS DEVELOPING A REVOLUTIONARY METHOD TO TEACH CHATBOTS COMMON SENSE
June 18, 2016	Medical Imaging Leaders Tap IBM and Watson to Tackle Cancer, Diabetes, Eye Health, Brain Disease and Heart Disease

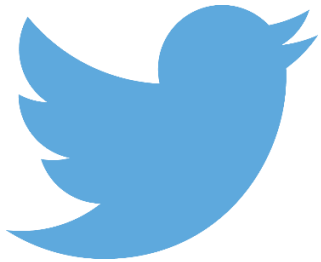

RECENT DEALS

RECENT ARTIFICIAL INTELLIGENCE DEALS

Company	Round	Description
CYLANCE	$100M Series D, June 2016	Applies AI to detect malware threats.
MAANA	$26M Series B, May 2016	Data mining and machine learning solutions for IoT
Fractal	$100M Growth Equity, May 2016	Machine learning-based data analytics for businesses
Globality	$27M Series B, April 2016	AI-based global trade solutions
iCarbonX	$154M Series A, April 2016	AI-based healthcare analytics startup

QUESTIONS?

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