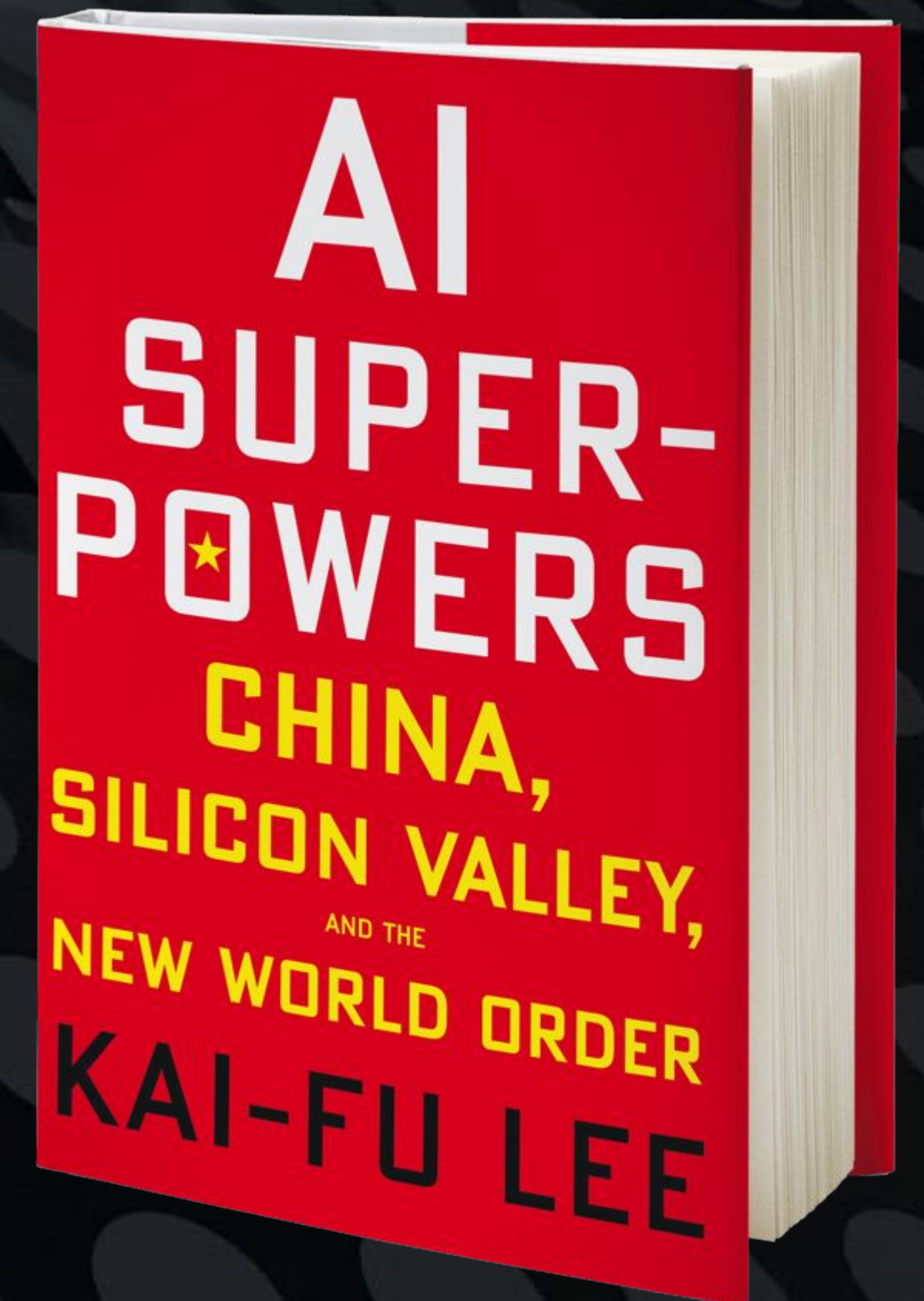


# The Era of AI:

## *The Rise of China & The Future of Work*

**Dr. Kai-Fu Lee**

Chairman & CEO, Sinovation Ventures





# Deep Learning: “What do you think about AI?”



It's a great thing to build a better world with Artificial Intelligence

人工智能正在改变世界



# Four waves of Artificial Intelligence Applications

## Wave 4: Autonomous AI

2015



## Wave 3: Perception AI (digitized physical world)

2011



## Wave 2: Business AI

2004



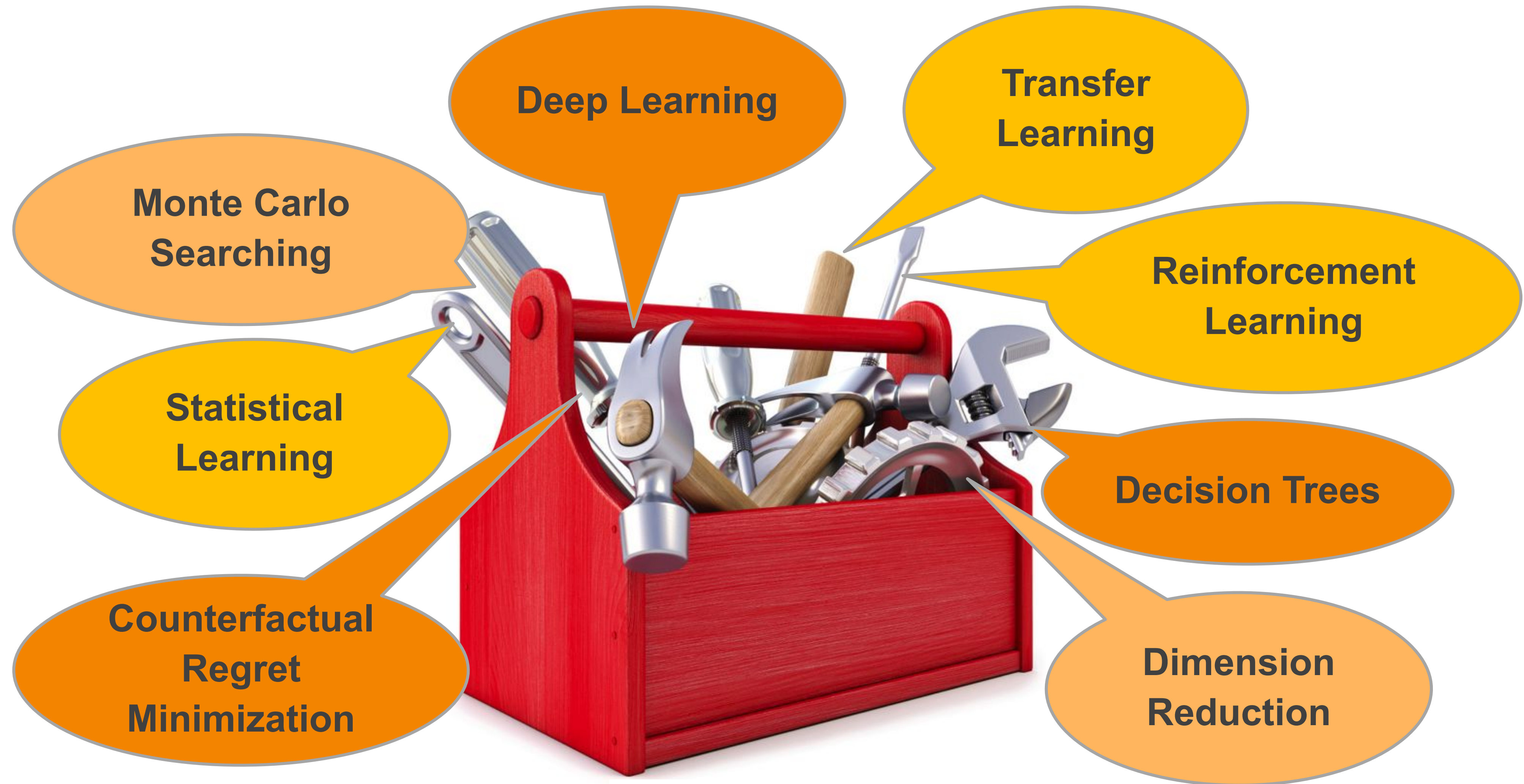
## Wave 1: Internet AI

1998





# AI Becoming Toolbox, the Next New Platform





# Five Premises of AI

Massive data

1

Accurate,  
objective tagging

2

Single  
domain

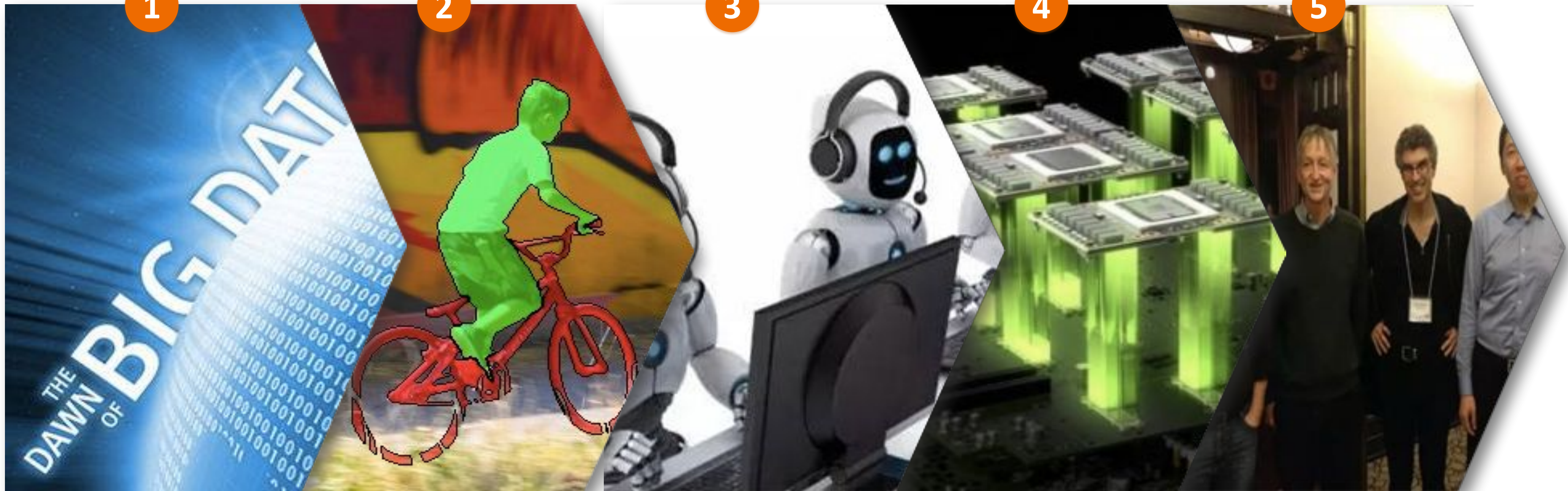
3

Computation  
power

4

AI Experts

5

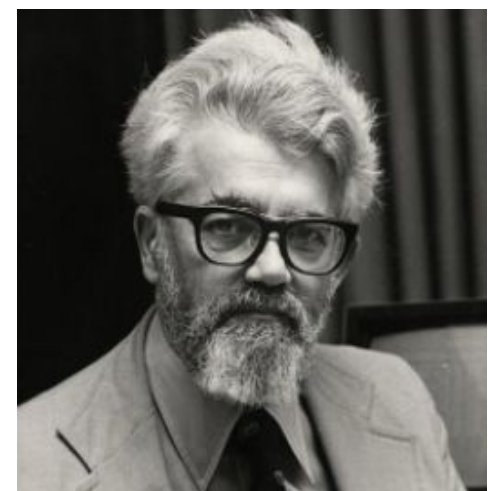
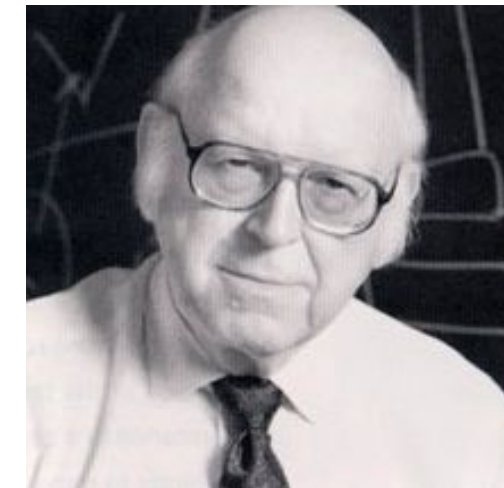
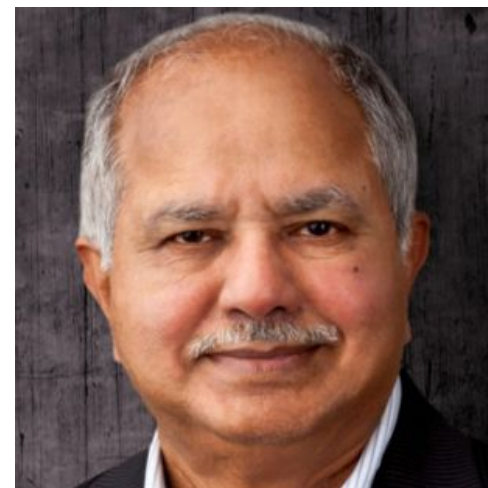


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# US Leads in AI Science & Top Scientists

## Turing Award Recipients in AI



## Deep Learning Inventors





# Also Silicon Valley Seems to Dominate the World...

... in every field

PC: **Wintel**

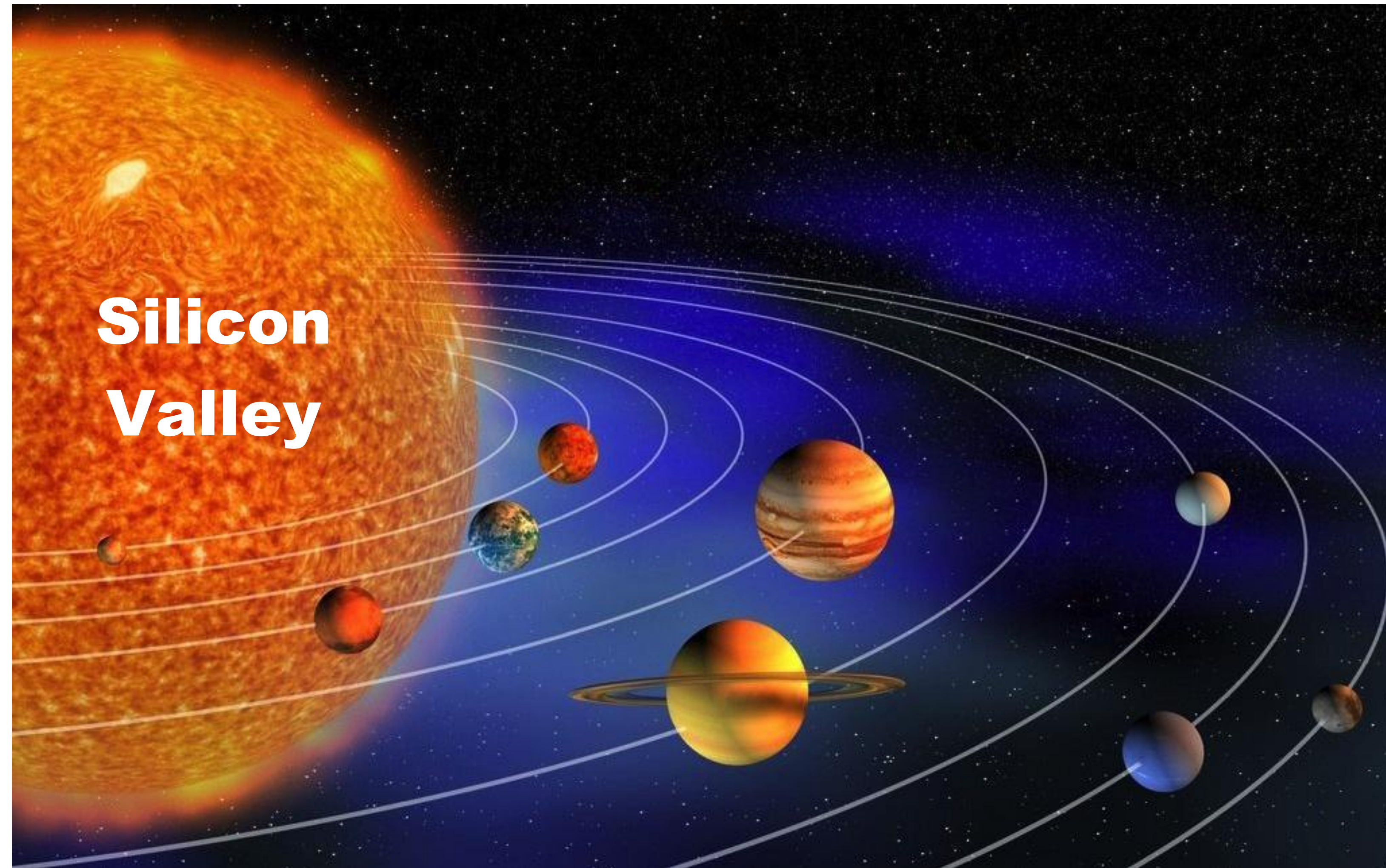
Software: **Oracle**

Portal: **Yahoo**

Search: **Google**

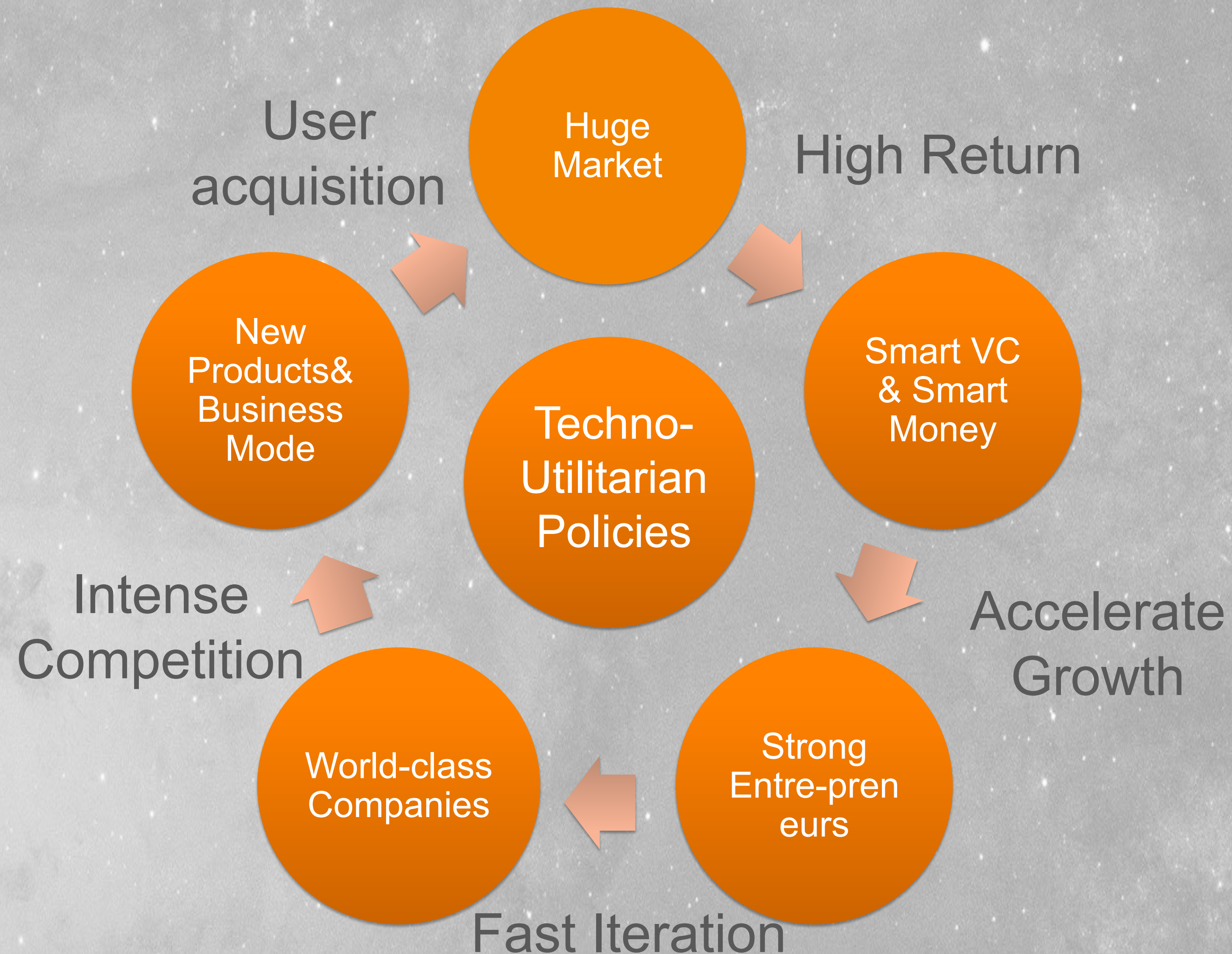
Smart phone: **Apple**

Social: **Facebook**





... Until the "Chinese Miracle" in the last 10 years

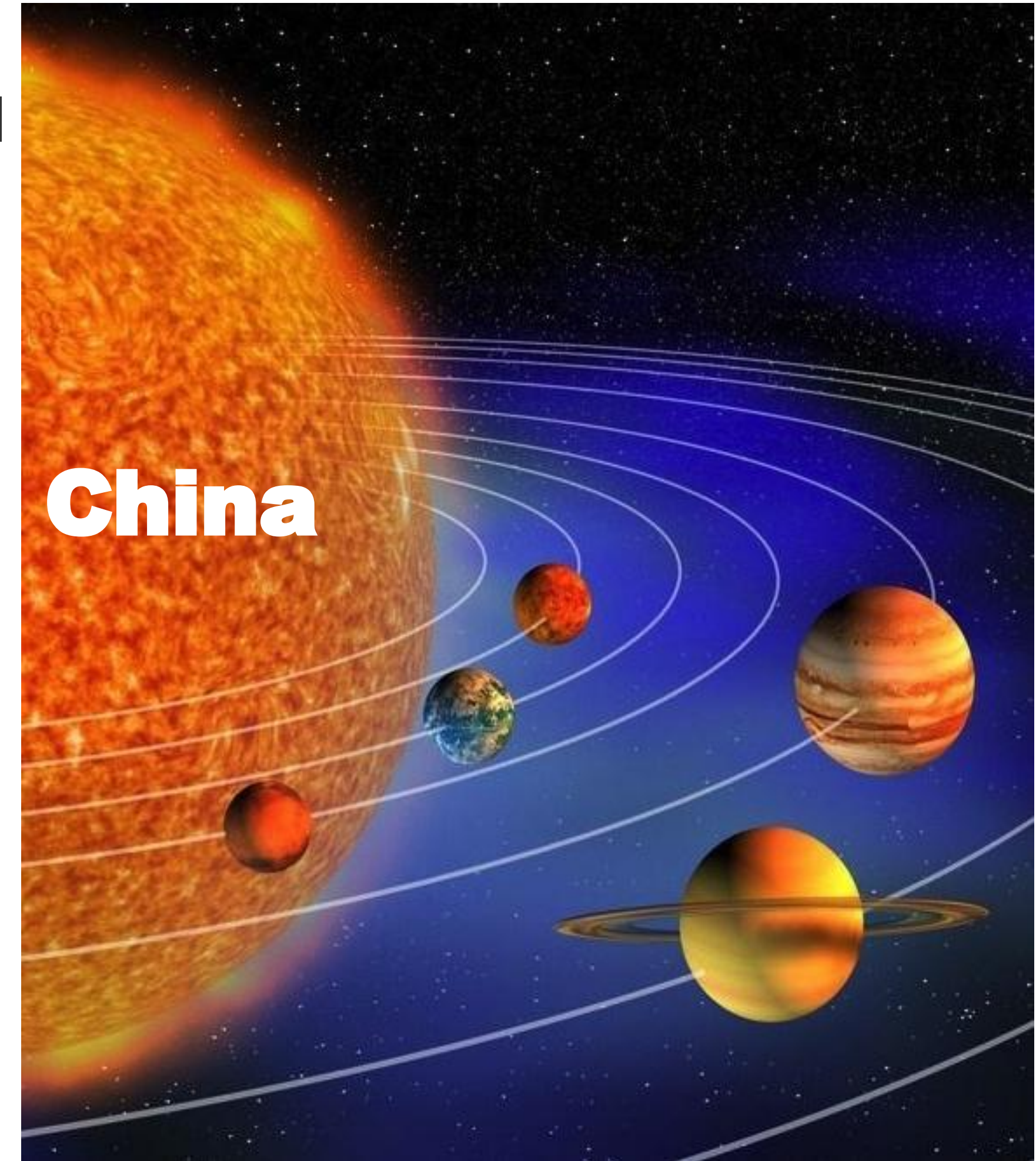




# 2018: US & China Have Become Parallel Universes



US Model	China Model
Breakthrough	Fusion + speed
Technologies	Applications
Vision-driven	Result-driven
Light	Heavy
Globalized	Localized





# Advantage 1: Chinese Product Innovation Caught up with US

Copied from  
U.S.

Baidu 百度

网易  
NETEASE

sina 新浪

搜 狐  
SOHU.com

Inspired by  
U.S., then  
leapfrogged



知乎



meitu

淘宝网



Chinese  
innovations



mobike



Entering the era of:  
Copy-from-China



SINO VENTURES



# Advantage 2: Tough Market Begets Tough Entrepreneurs

**Gladiator-like  
Chinese entrepreneurs**



**Strong fund raising capability  
High competitive barriers**



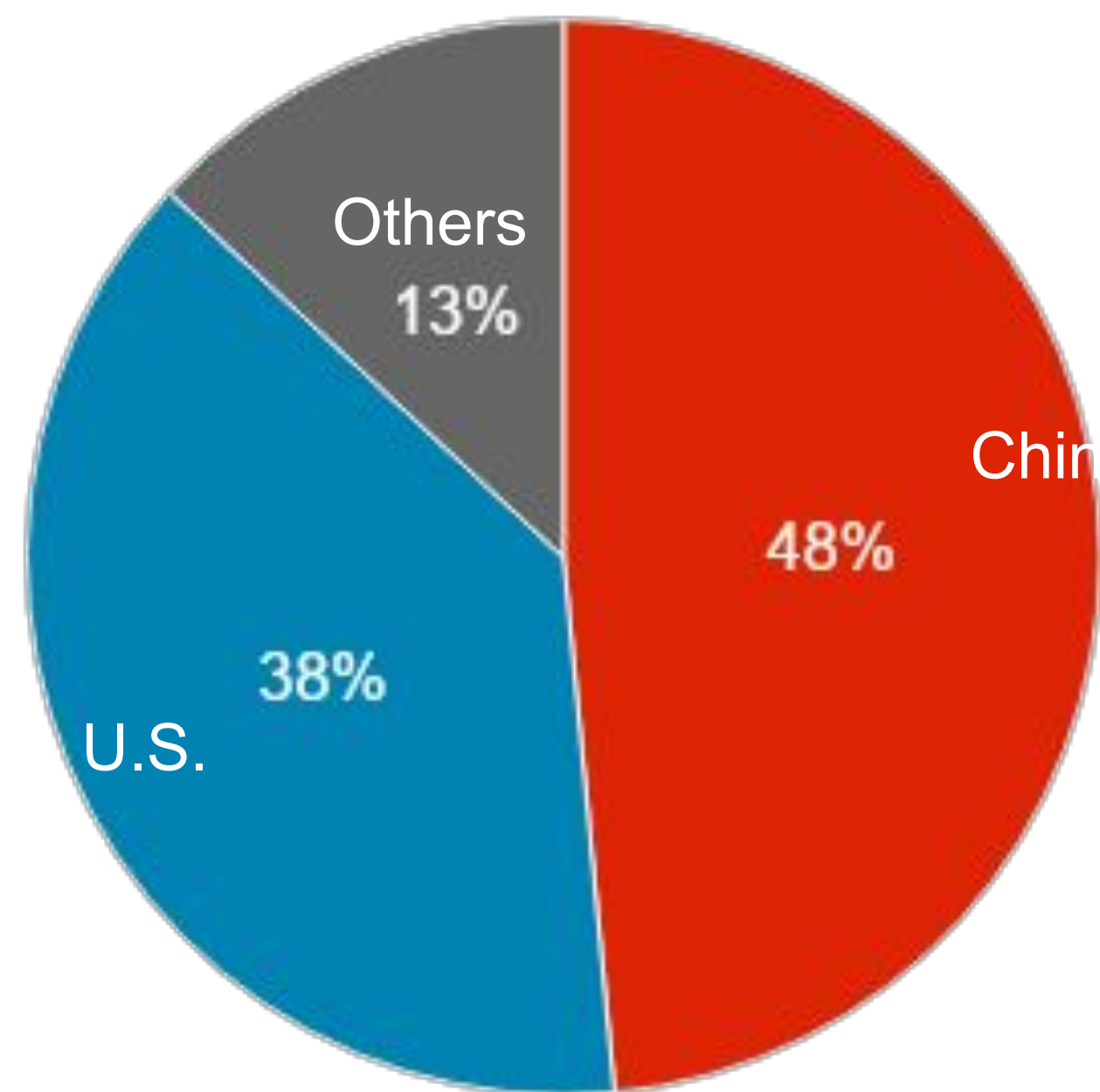
**We're only working:**

**996**

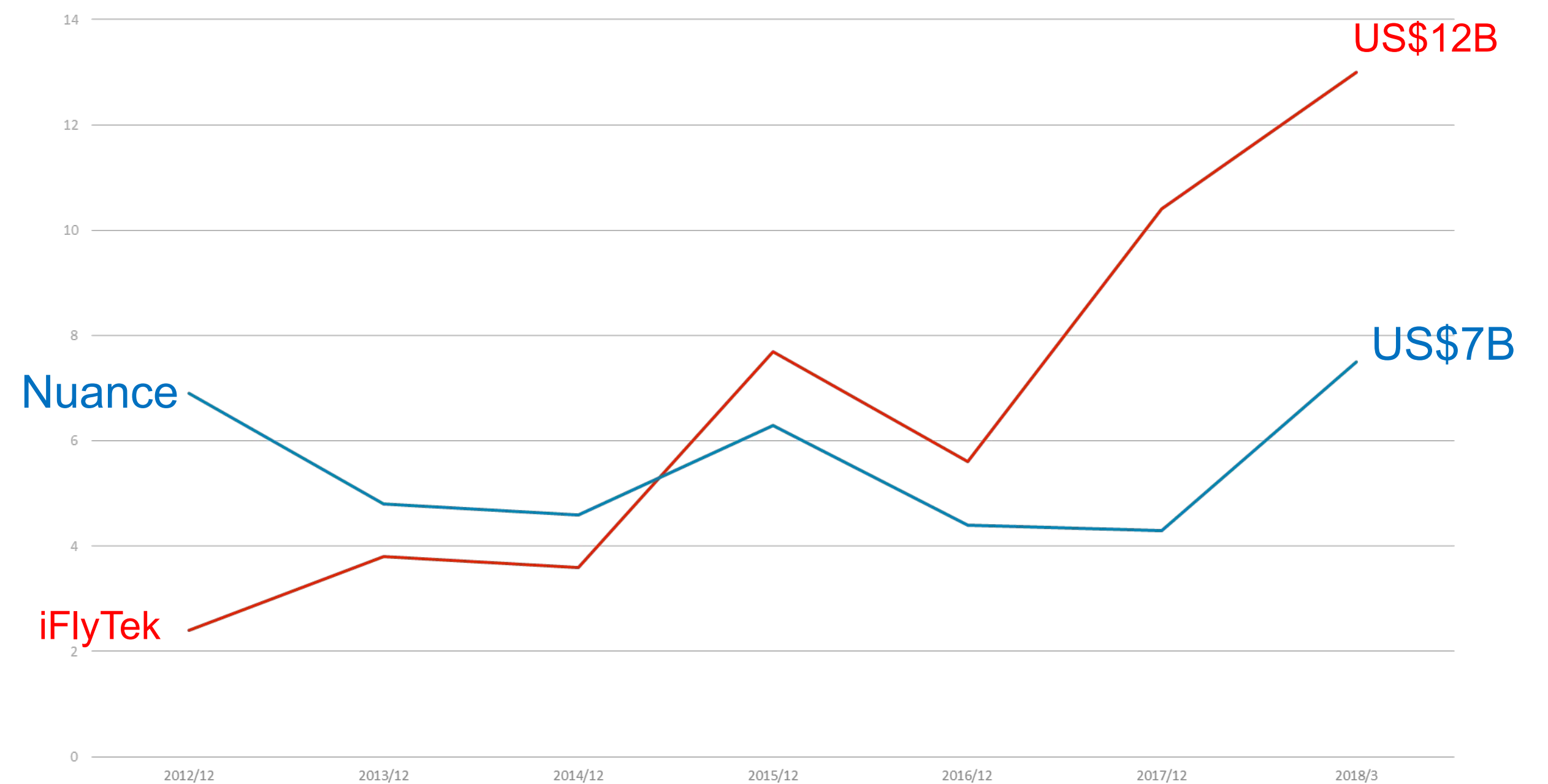


# Advantage 3: China's AI Capital Leads the World

2017 world-wide AI investments



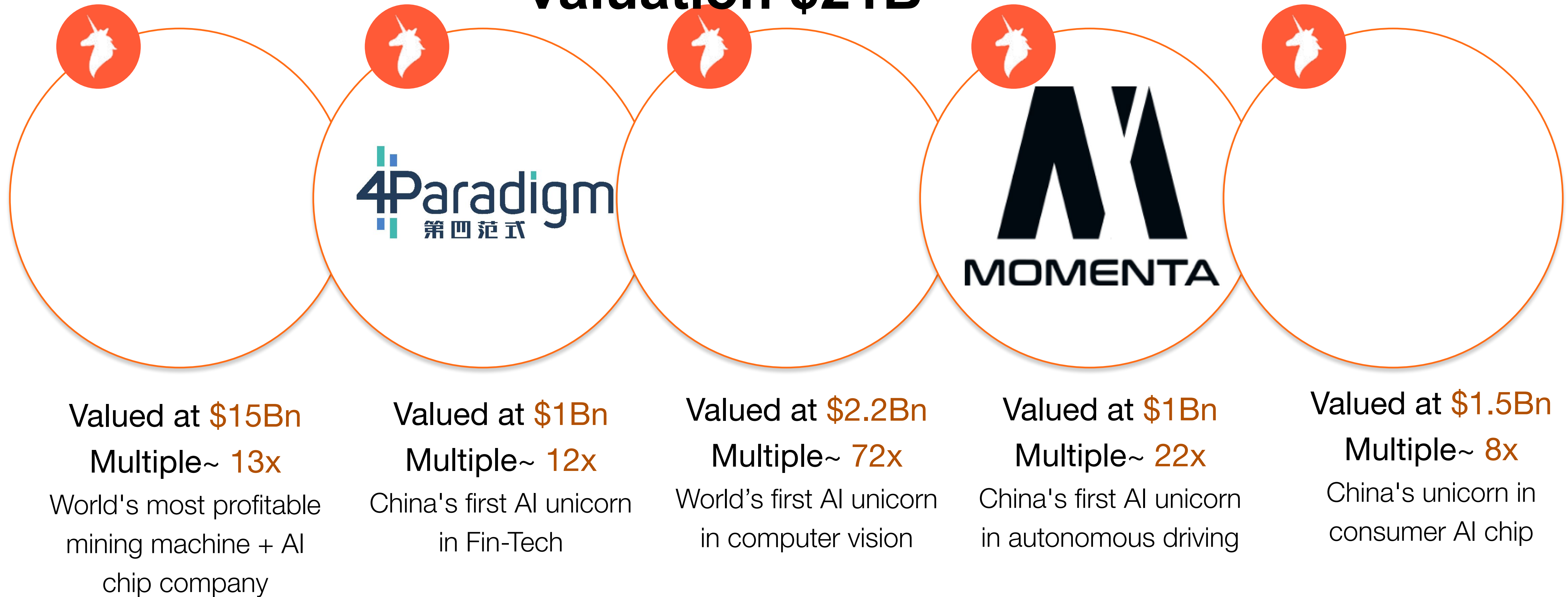
China-US Top Voice Recognition Company Valuation (in USD billions)



Source: CB Insights 2017 Global Artificial Intelligence Investment



# Sinovation Ventures' s AI unicorns, total valuation \$21B





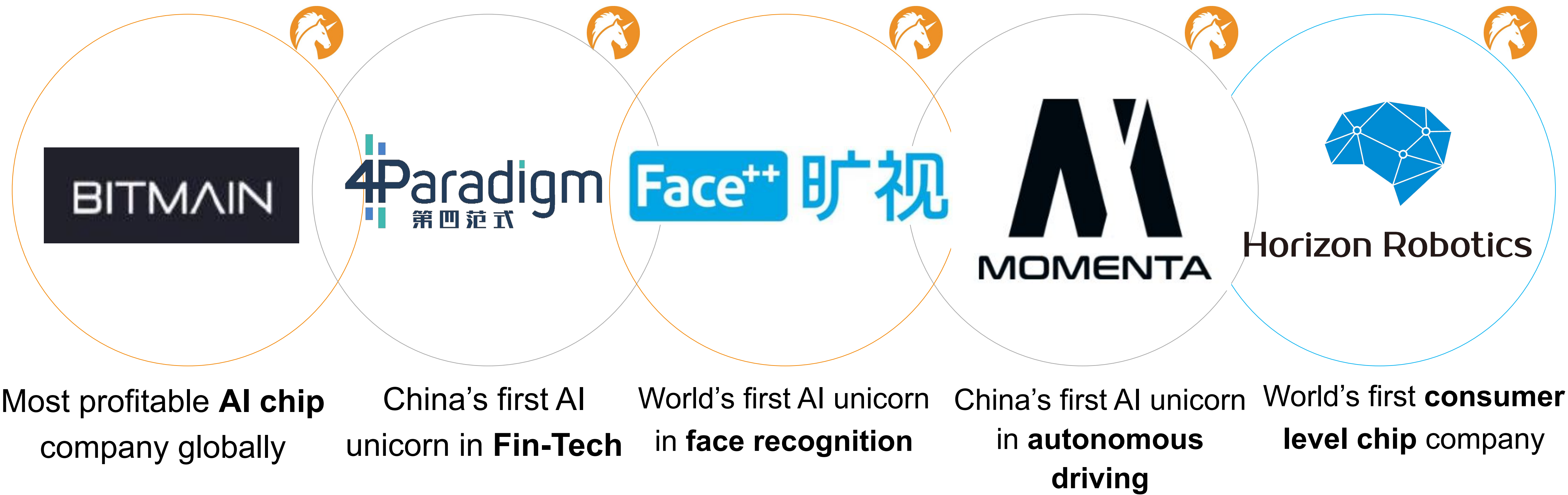
# Advantage 4: AI enters into Era of Implementation





# 5 AI Unicorns in Sinovation Portfolios

Total Valuation = US\$23 billion

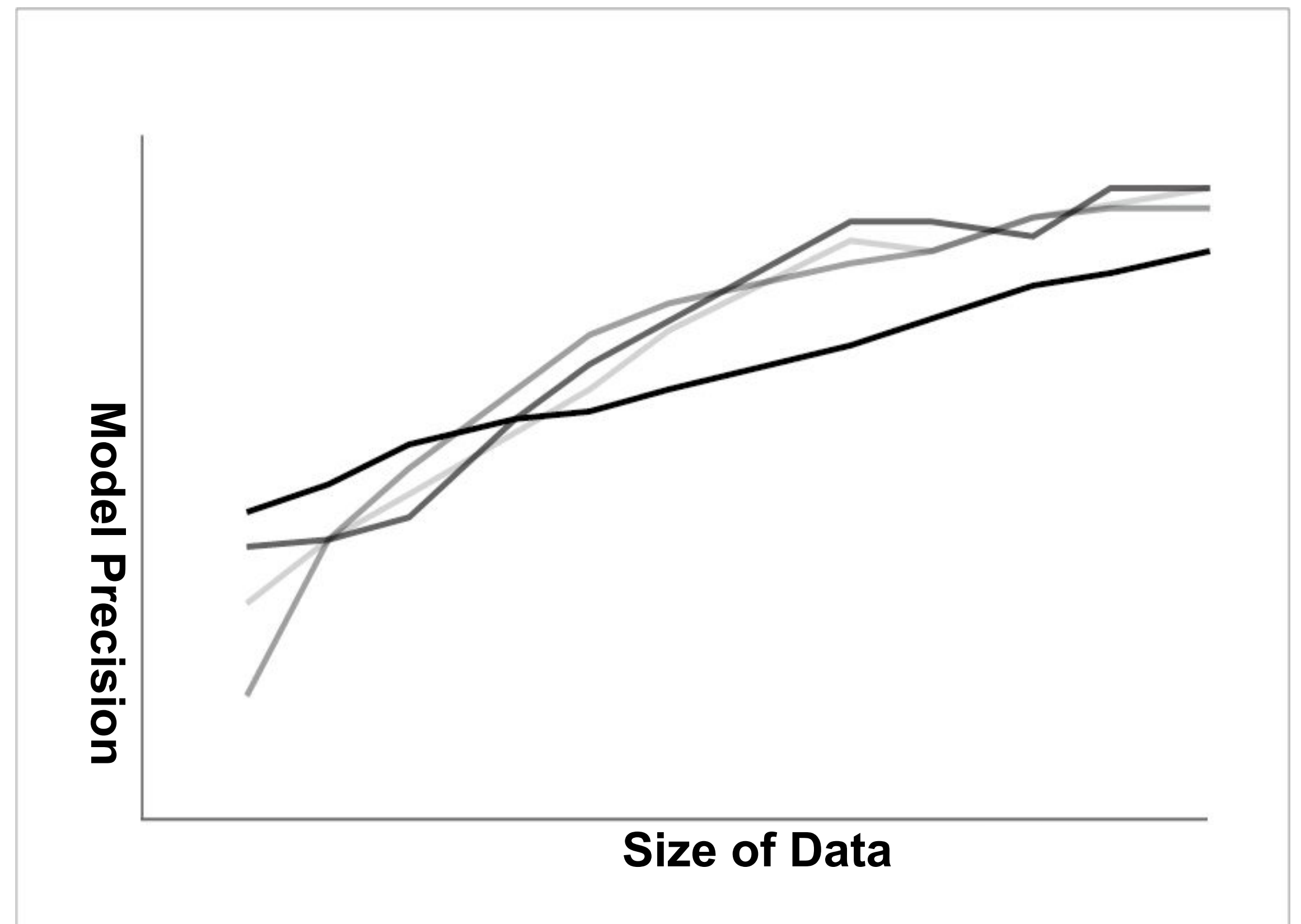




# Massive Data is Critical for AI Product Success

Big Market = Big Data = Best AI

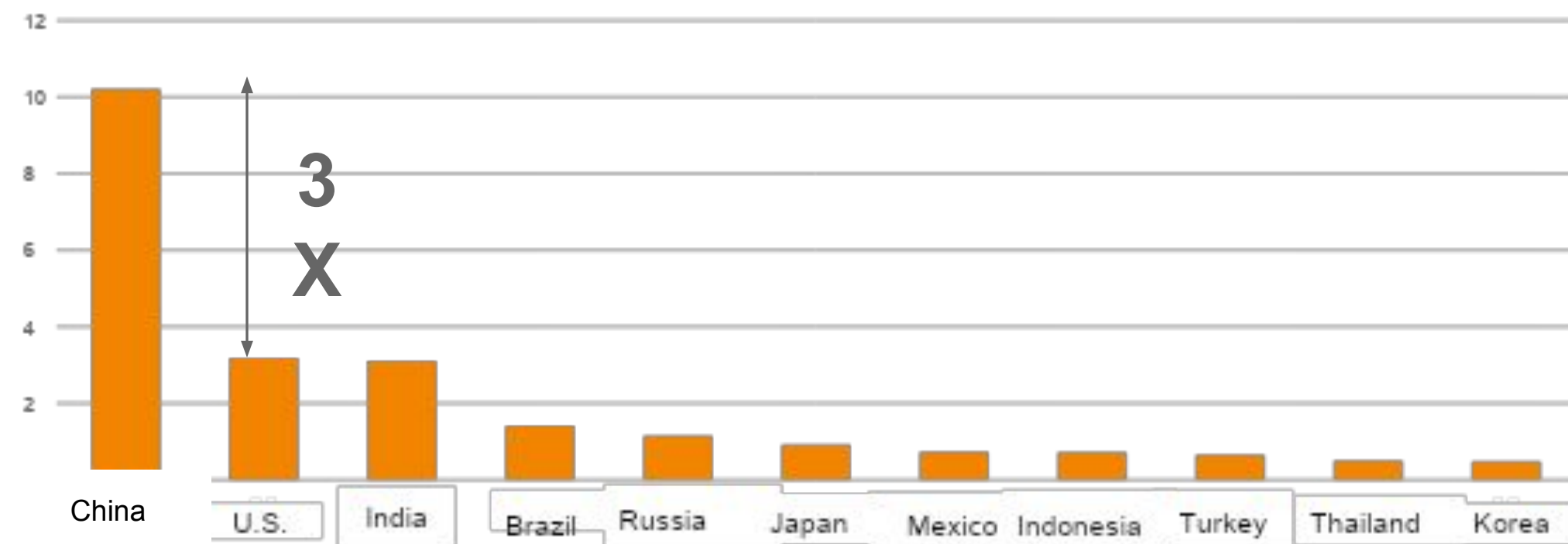
Algorithms are important  
Data is even more critical



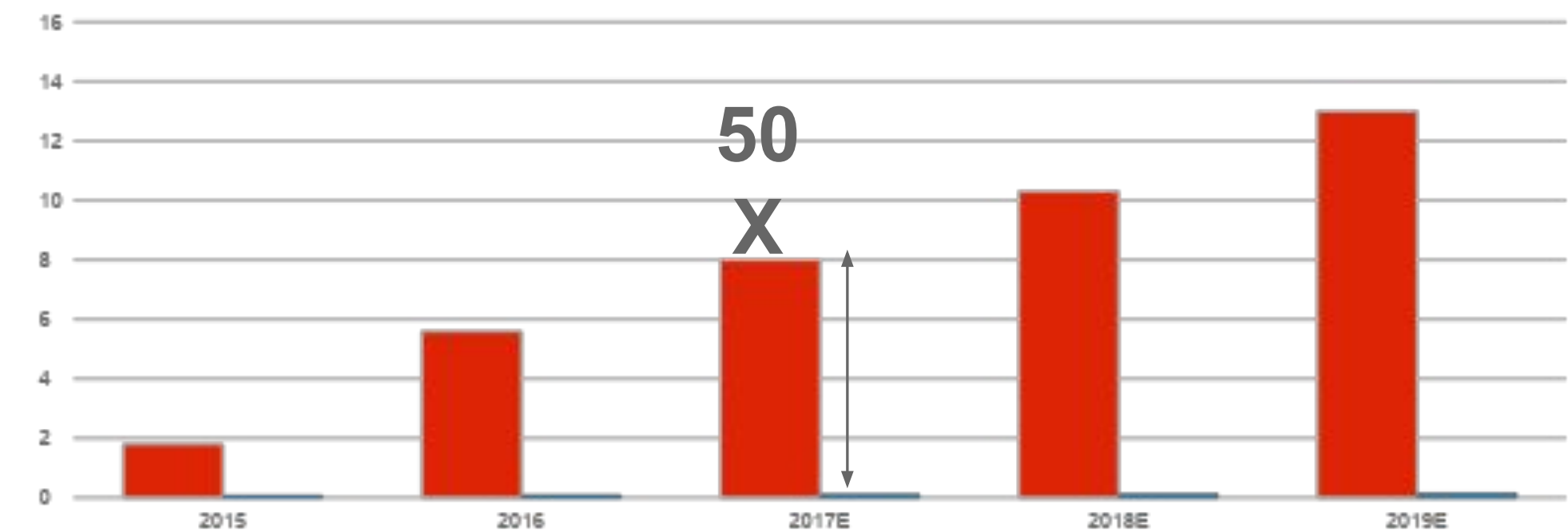


# Advantage 5: China is the Saudi Arabia in Data

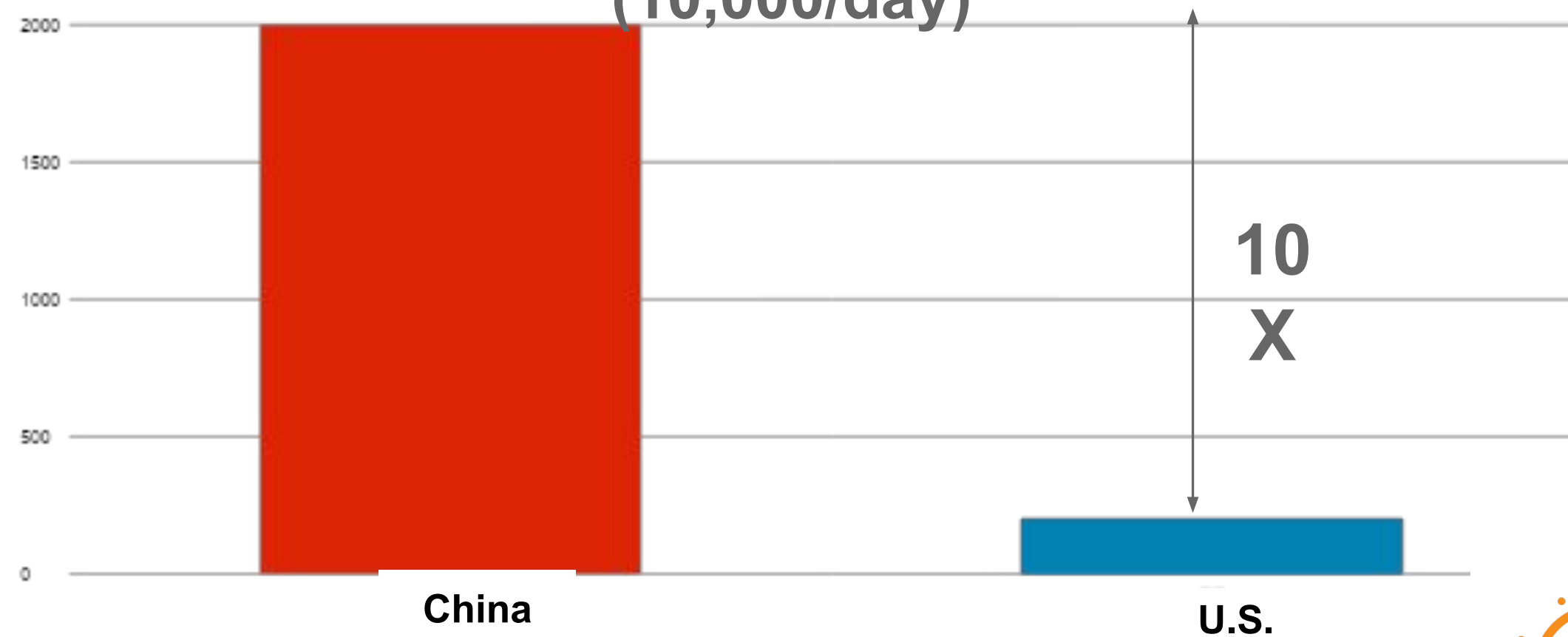
Mobile Internet users by country  
(100 million)



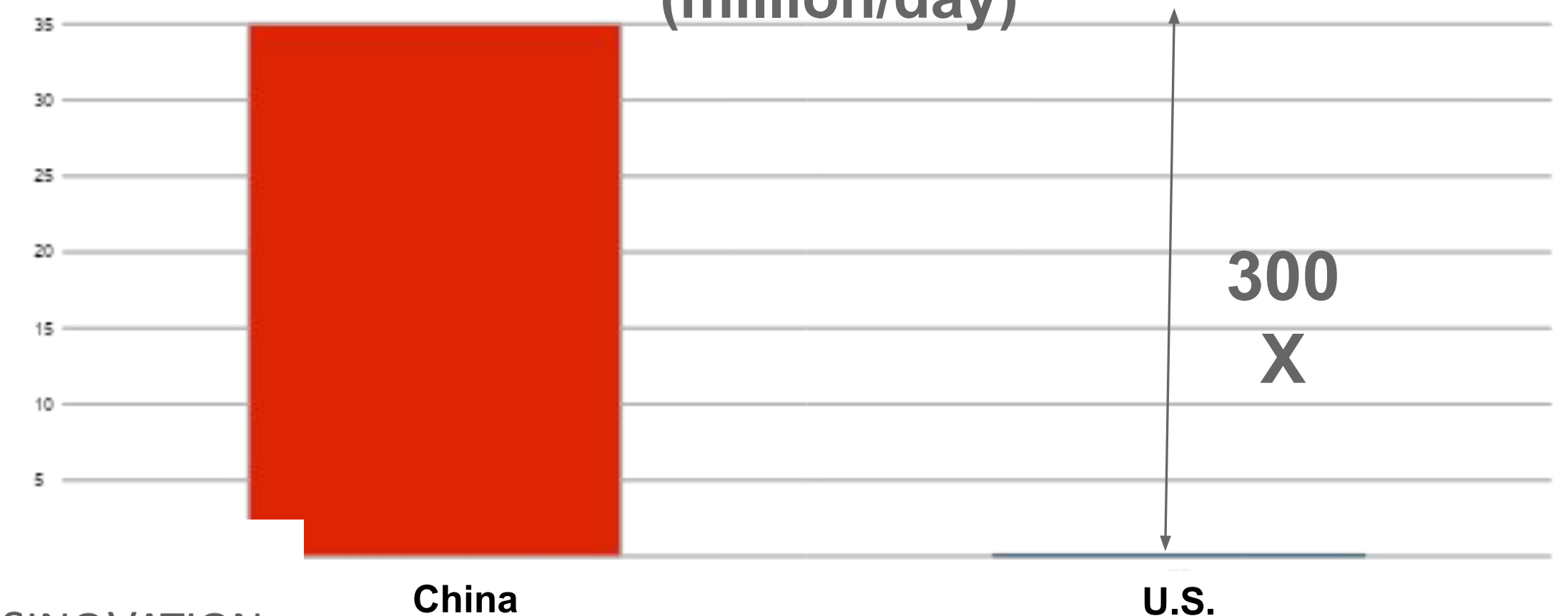
Mobile Internet, China vs. U.S.  
(USD trillion)



Food Delivery, China vs. U.S.  
(10,000/day)



Shared bike rides, China vs. U.S.  
(million/day)



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# Mobile payment everywhere

2017

China Mobile Payment

US \$18.8 trillion

2017

China GDP

US \$12.9 trillion





# Advantage 6: Techno-Utilitarian Chinese Policies



## Chinese State Council AI Development Plan, July 2017

- By 2020: Lead AI technology & applications
- By 2030: Become global AI innovation hub



## Sino-US comparison:

United States: Prohibit driverless truck testing

China: Create new cities and highways for autonomous vehicles



# Four waves of AI: China to catch up with US in 5 years

NOW

5 YEARS LATER



Internet AI



Business AI



Perception AI



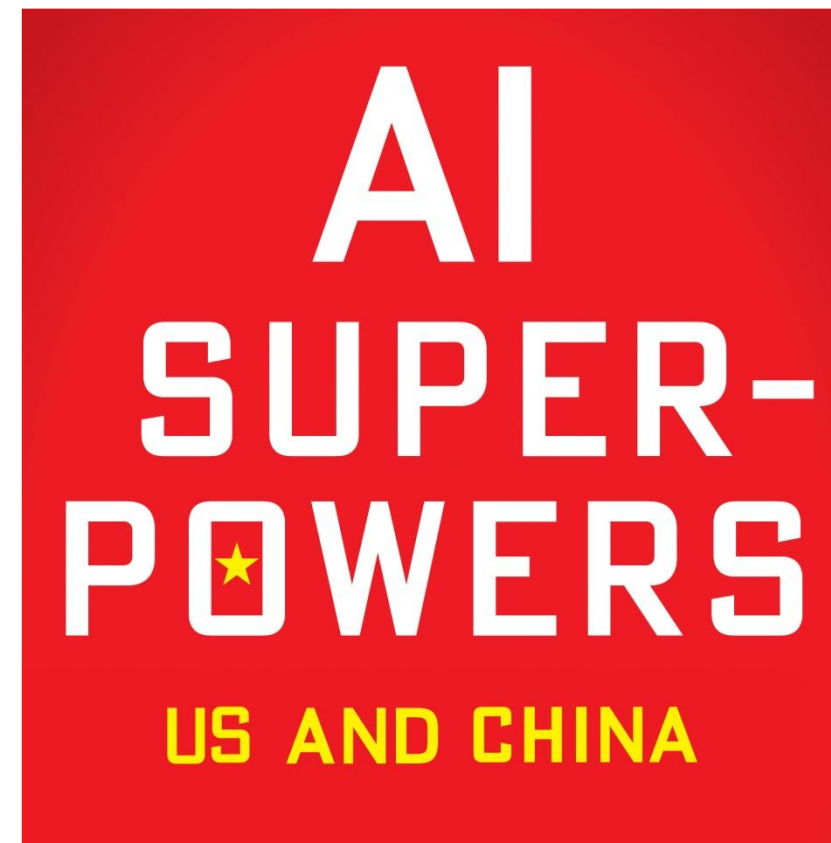
Automation AI





# The Four Forces Accelerating AI

## 1 Sino-US dual engine



## 2 7 giants with own virtuous cycle



## 3 AI VC & funds growing rapidly

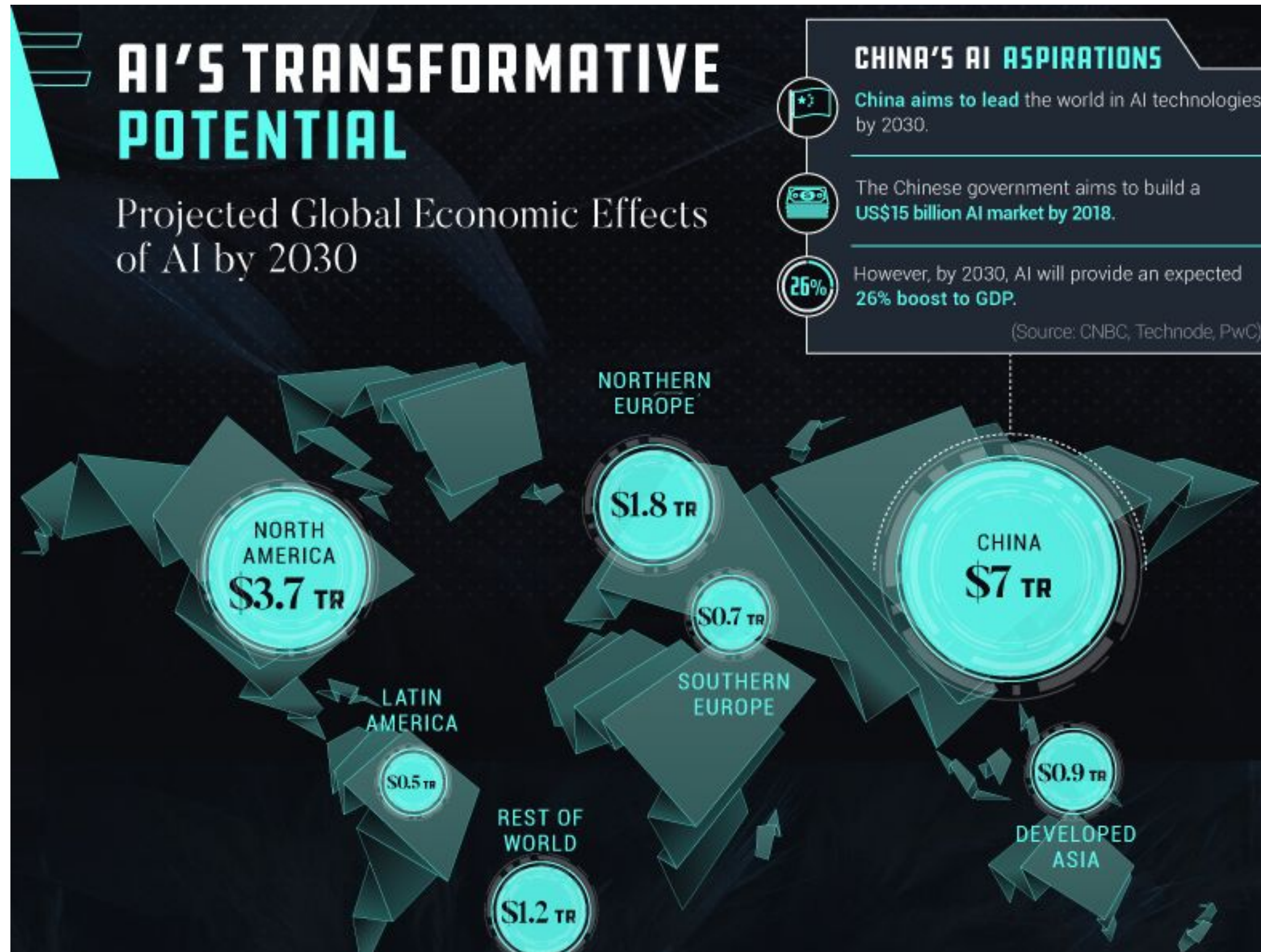


## 4 AI platform emerging; many apps coming





# Just “Weak AI” Will Create Unprecedented Wealth



**\$ 15.7 Trillion**

**By 2030**

PWC predicts the size of the world AI market (2017 China + India GDP = \$15.3 trillion)



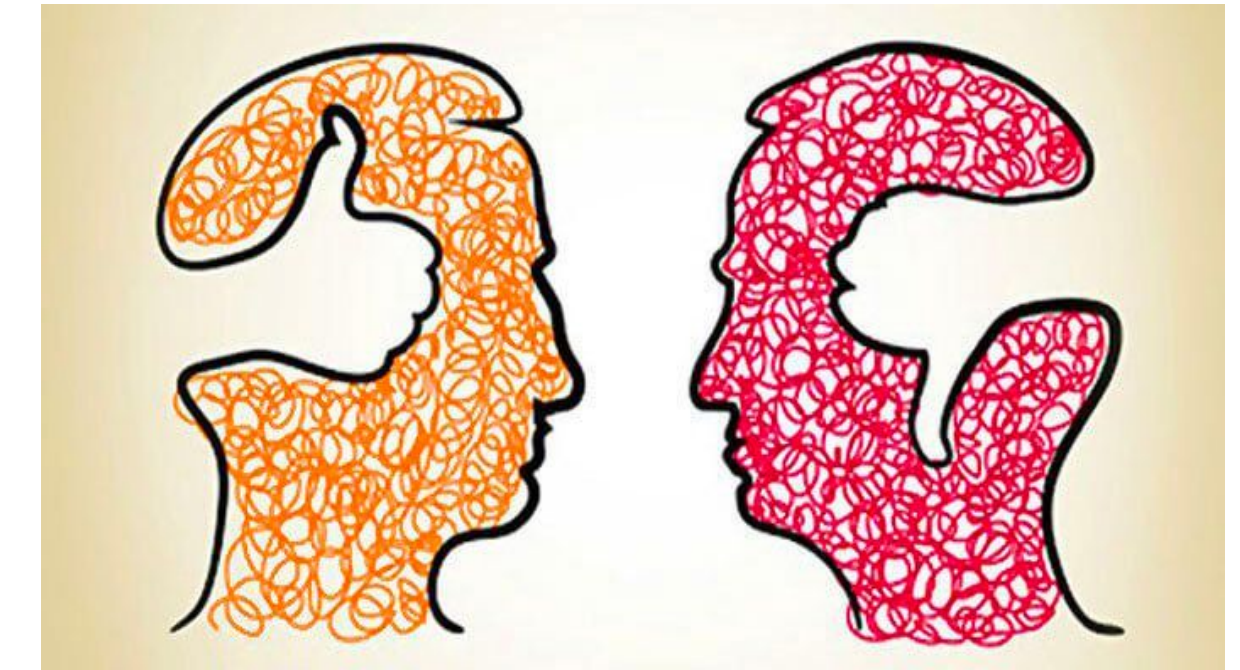
# AI will also cause unprecedented challenges



**Privacy**

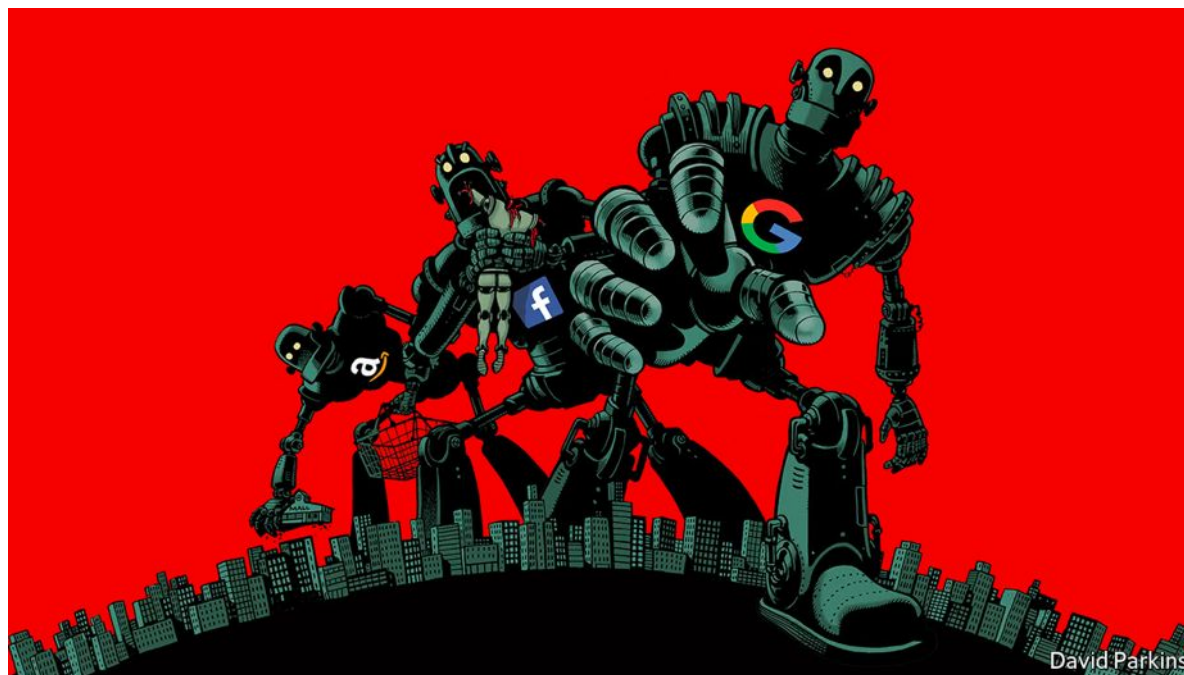


**Security**



**Bias from Data**

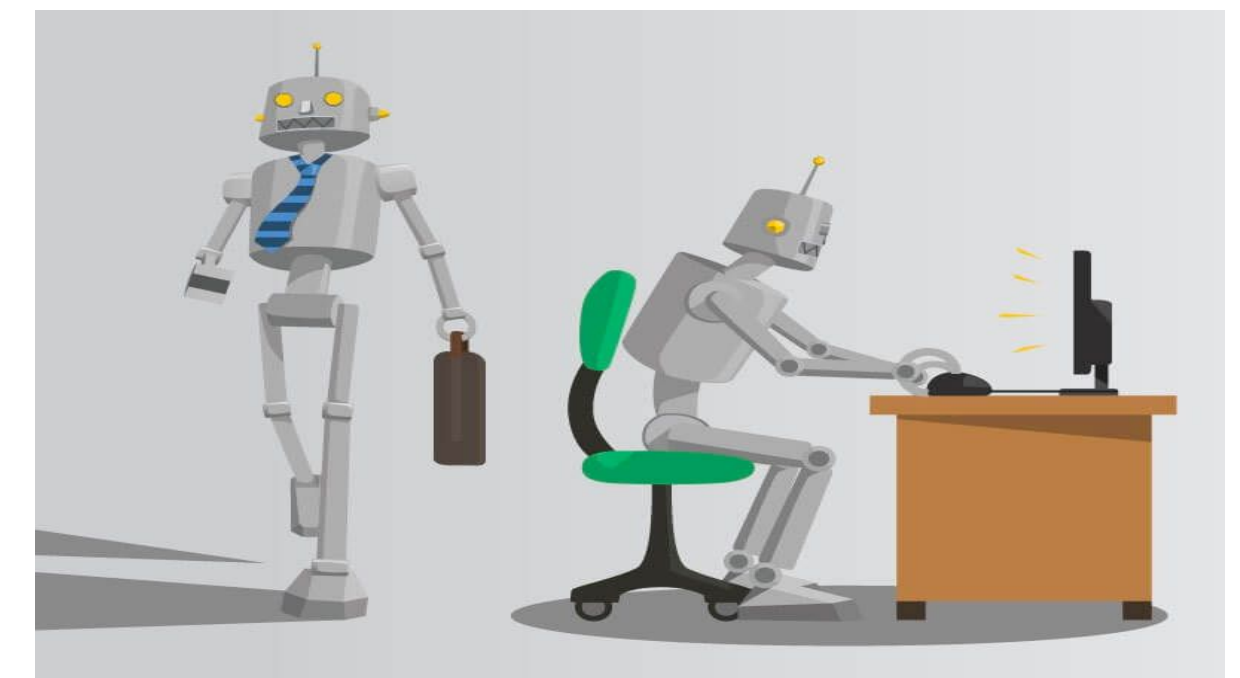
**Giant Dominance**



**Wealth Inequality**

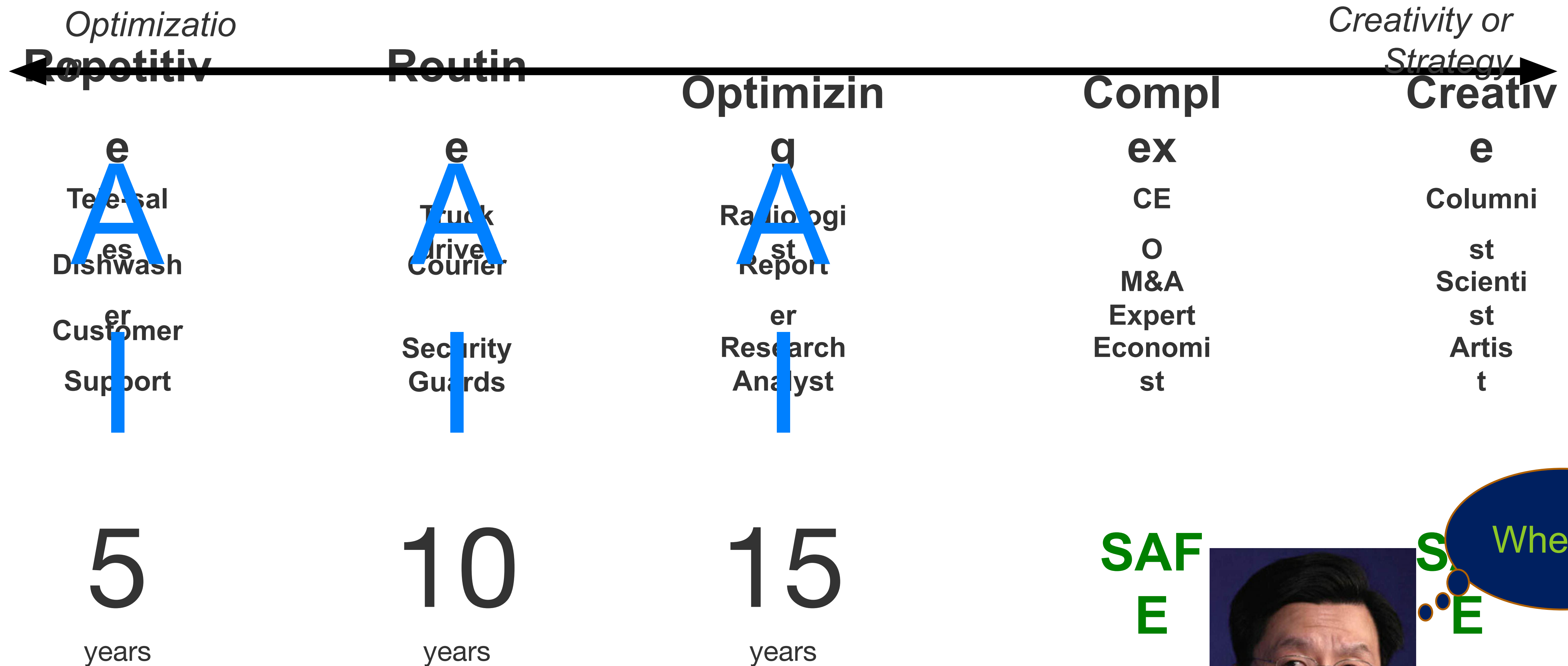


**Job Displacement**





# AI Displaces Jobs Much More Than It Creates





# The Displacement is Happening ... Starting NOW!!

Blue collar

white collar

## THE WALL STREET JOURNAL.

Asia Edition | July 17, 2018 | Today's Paper | Video

### Robotic Chefs Arrive in Restaurant Industry

Flipping burgers, cooking pizzas and making coffee is just the beginning

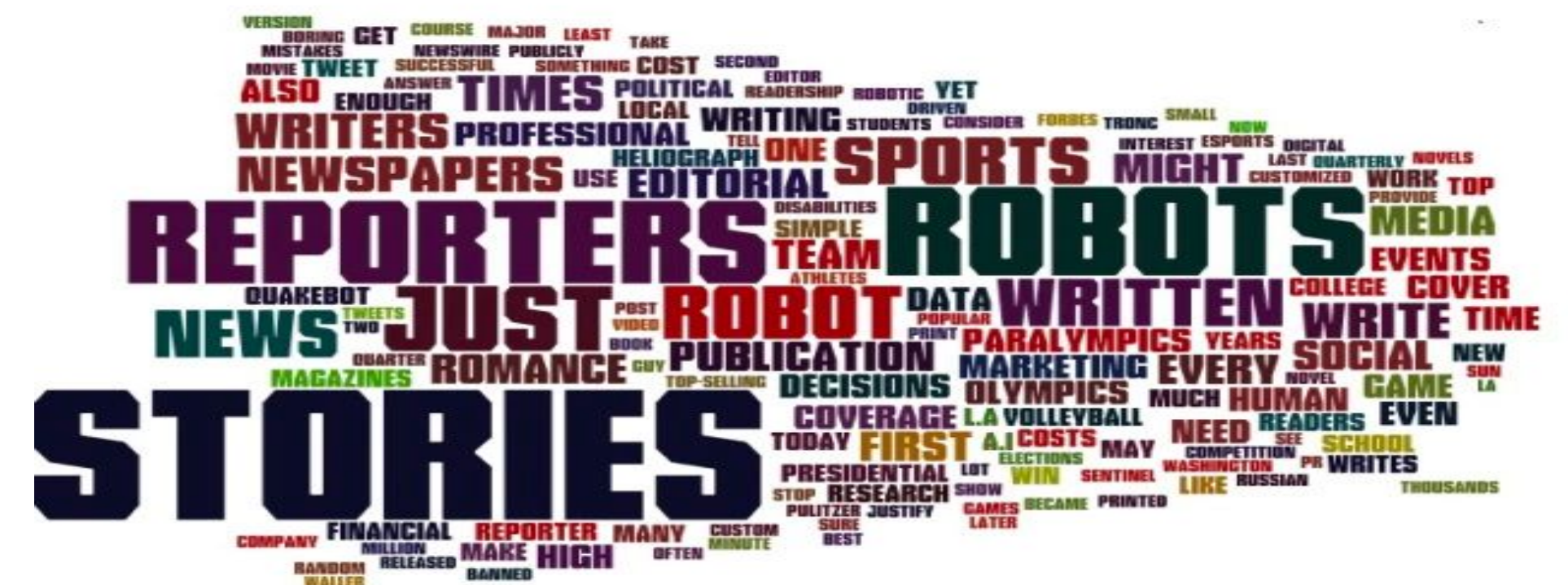


## FINANCIAL TIMES

### Citi issues stark warning on automation of bank jobs

Investment banking leaders eye future in which machines take over 'lower-value tasks'

Citigroup's investment bank has suggested that it will shed up to half of its 20,000 technology and operations staff in the next five years, as machines supplant humans at a faster pace.





# Wave of Unemployed All Becoming “Creative”?

*Optimization*

*Creativity or Strategy*



**Complex**

**Creative**

**CEO**

**Columnist**

**M&A Expert**

**Scientist**

**Economist**

**Artist**

**SAFE**

**SAFE**

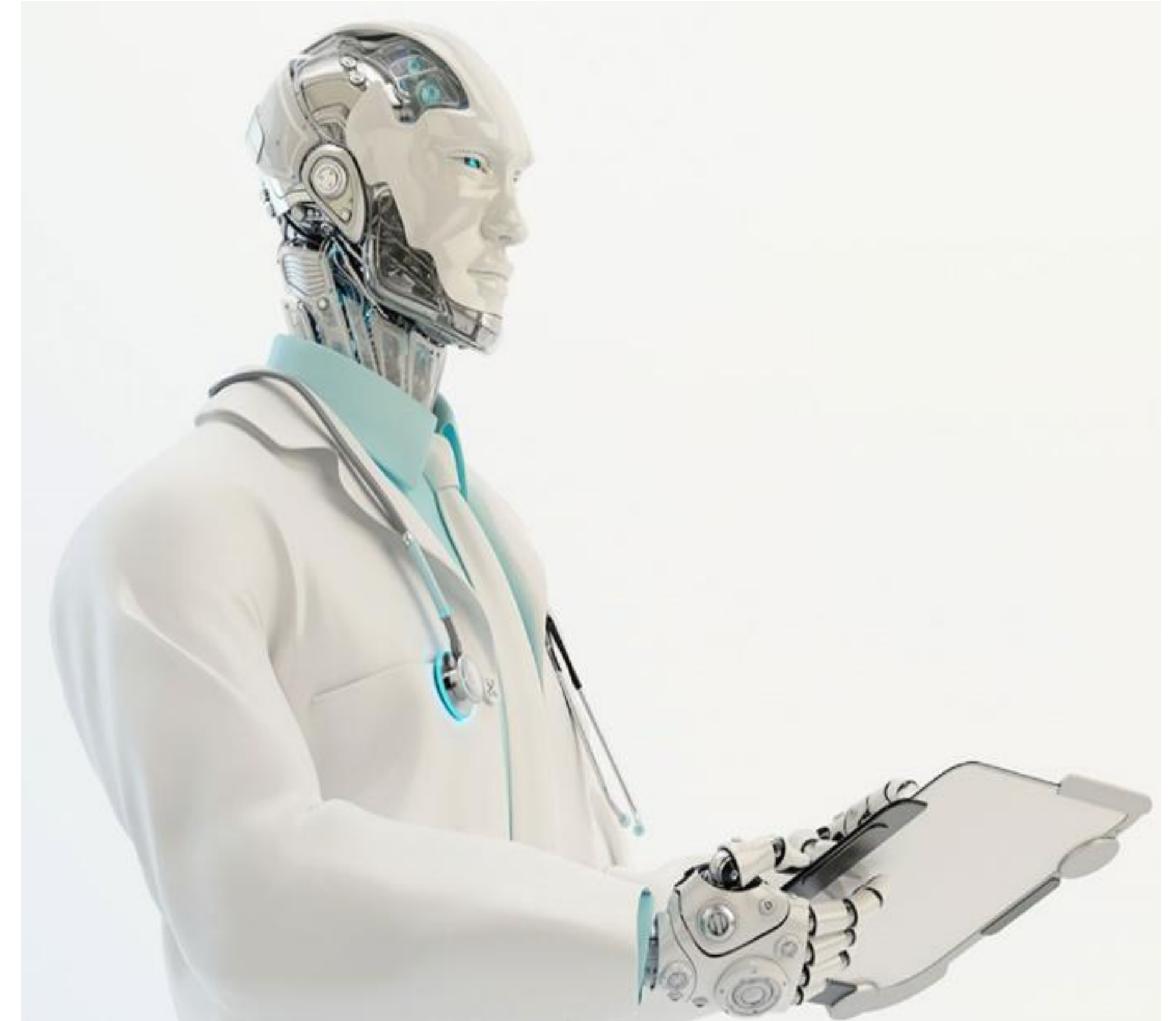


# The Two Weaknesses of AI: No Creativity & No Love!

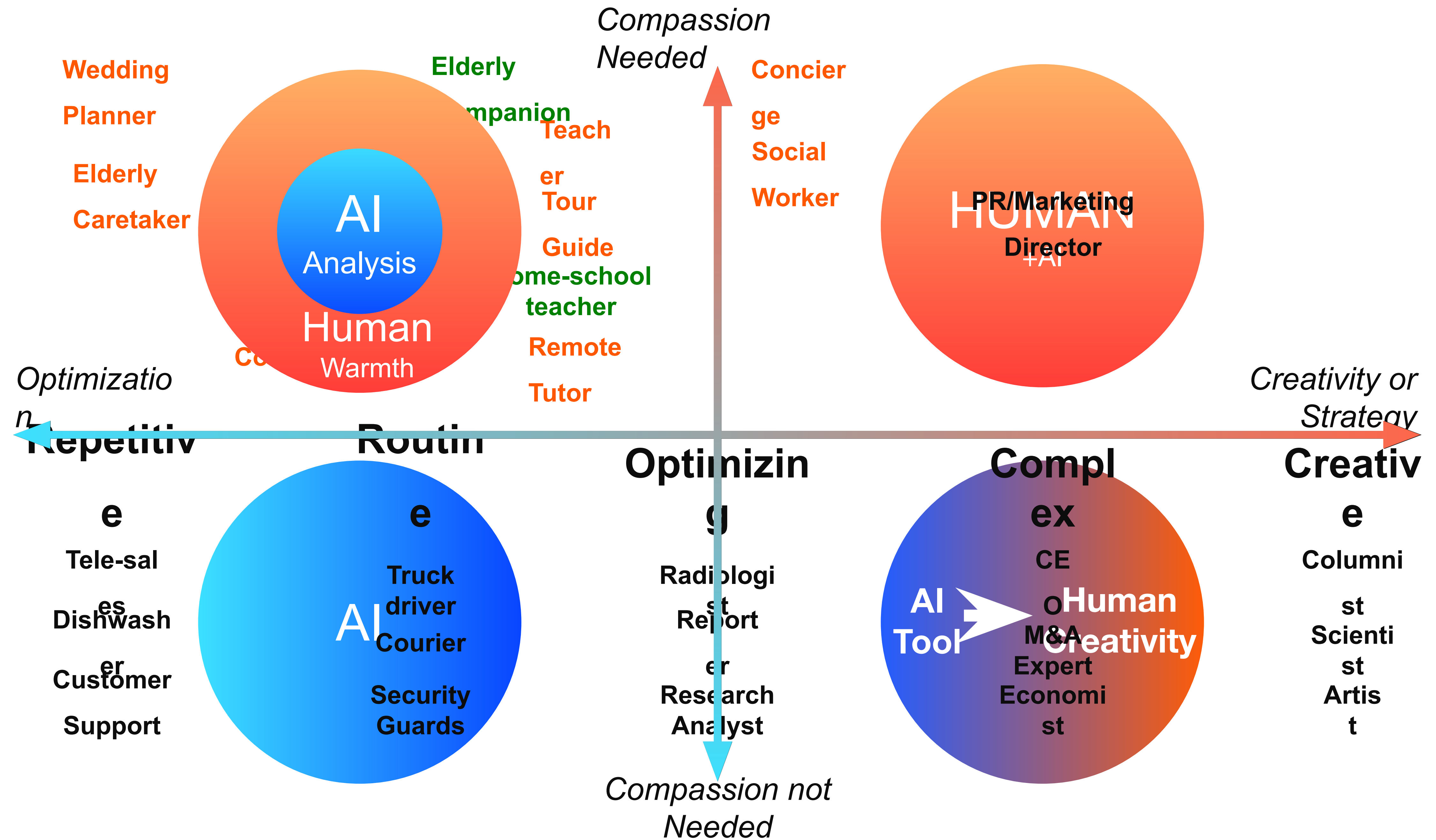
**AI is just a tool, and cannot create**



**AI has no self-awareness or love**









# Advice for the Government in the AI Era

- Think tanks should study job displacement seriously
- Entrepreneurism □ job creation
- Education: shift to jobs not replaceable by AI
- Minimum Basic Services (not UBI)
- Social Stipend: Care, community service, education

**A new social contract**



**But AI is not nuclear weapon, it is electricity**



创新工场  
SINO VATION VENTURES

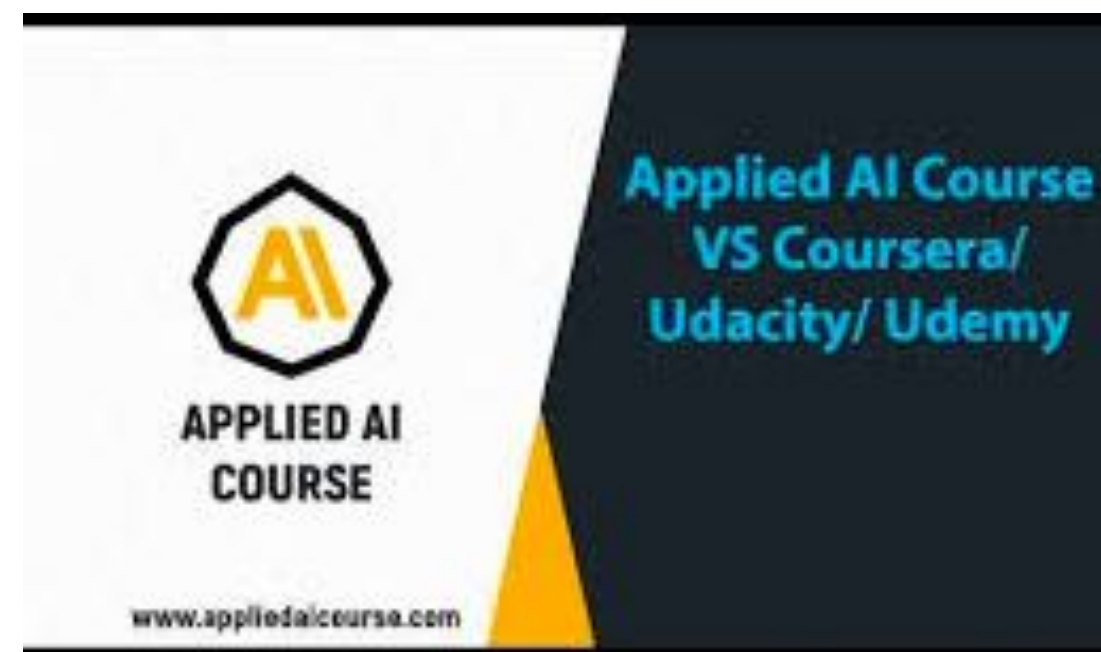


# AI communities are naturally open & sharing

arXiv.org

IMAGENET

kaggle



AI CHALLENGER

  
GitHub

 SINOVAION  
VENTURES





# We can solve these problems if we work together



Gifted  
Education



# AI: Era of Human Enlightenment

1. Be thankful of the AI Era:
  - Liberate us from routine work
  - Push us into thinking what makes us human
2. Be responsible for humanity:
  - We have free will,
  - and must choose to write our ending to the AI story



# Thank you!

