

Big Data & AI

Hu Jian Jun
VP & CCSO of Siemens China








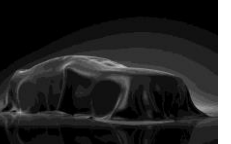

Digitalization changes everything

Artificial intelligence and big data analytics are revolutionizing the way we make decisions. And billions of devices are being connected by the Internet of Things and are interacting on an entirely new level and scale.

Many major breakthroughs in Artificial Intelligence (AI) since 2011, **SIEMENS** will have significant impact on people's daily life, as well as industries *Ingenuity for life*

Definition of AI

Creating machines that perform functions that require intelligence when performed by people (Kurzweil, 1990)

Before 2011			2011 ~ 2017			Expected by 2030+		
1946	1997	2005	2011	2014	2016	~ 2020	~ 2030	20xx
<p>Zuse's Z3, first programmable electronic computer</p> 	<p>IBM Deep Blue defeats world's chess champion Kasparov</p> 	<p>Honda's humanoid robot Asimo comes to life</p> 	<p>Watson wins Jeopardy! against most successful contestants</p> 	<p>Alexa, Amazon's intelligent assistant debuts</p> 	<p>AlphaGo beats Lee Sedol in a Go match</p> 	<p>All-over virtual personal assistants as interface for consumers</p> 	<p>Fully autonomously driving cars become market-ready</p> 	<p>Robots may build robot "children" on their own</p> 

One Example– AI will enable autonomous machines

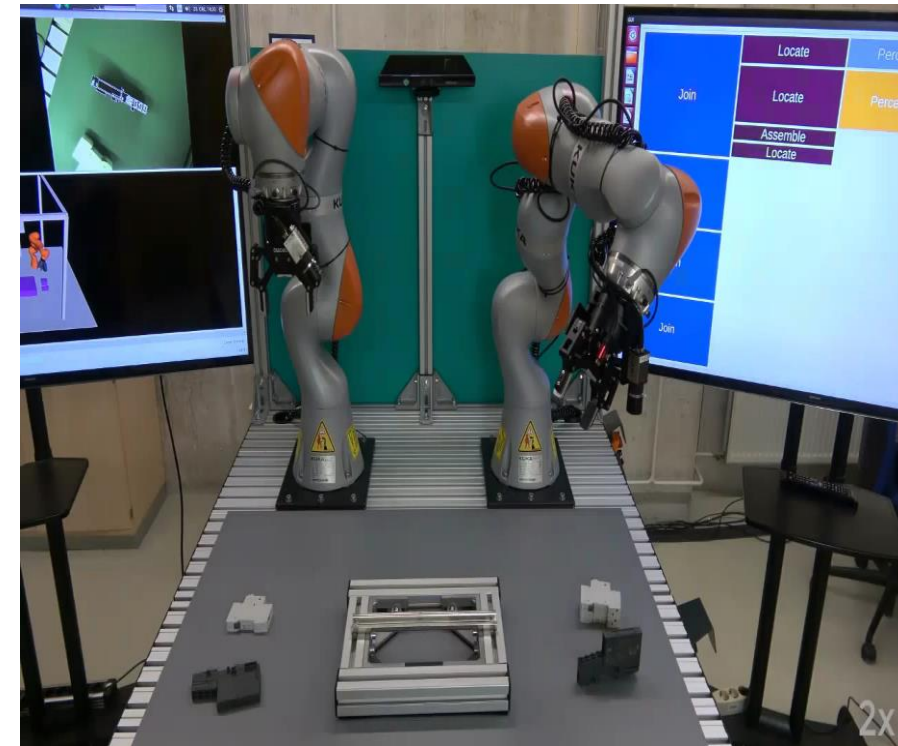
Industrie 4.0 Vision

- Object recognition using deep learning
- Learning to pick objects
- Matching of skills to tasks by reasoning on knowledge graph
- Autonomous action and motion generation

Self-adaptation (based on data)



Self-operation



Vision: Self-x without detailed programming or engineering
... and without human supervision

Some thoughts on AI

Q1

“Human being work as machine”
to
“Machine works as human being”

New battle for resource.
Not Oil this time but **Data!**
Data protection counts

Q2



Q3

Can we trust AI?
A question of
Cybersecurity

If 20% people can well serve
the whole world with AI,
what will happen to those 80% ?

Q4

Digitalization fundamentally impacts Chinese society

470 billion RMB

Total value of China's big data industries in 2017

30%

Growing year on year

20%

Estimated China's total data volume account of the world's total by 2020



Source: China Academy of Information and Communications Technology, 2018
Ministry of Industry and Information Technology, 2018

Thank You!

SIEMENS
Ingenuity for life



Hu Jian Jun

Chief Cybersecurity Officer (CCSO)

Siemens Ltd., China

7, Wangjing Zhonghuan Nanlu

100102 BEIJING, China

Tel.: +86 10 64766562

Fax: +86 10 64764814

Mobil: +86 18611016858

E-mail: jianjun.hu@siemens.com