

# The Age Of Artificial Intelligence: The World In 10 Years



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**AI & COGNITIVE  
SYSTEMS FORUM**

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CONNECTED TRANSPORT

---

MANUFACTURING

---

HEALTHCARE

---

ENERGY AND UTILITIES

---

BUILDINGS & INFRASTRUCTURE

---

OPEN INDUSTRY

---

ENABLING IoT

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**AI & COGNITIVE  
SYSTEMS FORUM**



**#IOTSWC19**

# It's 2030

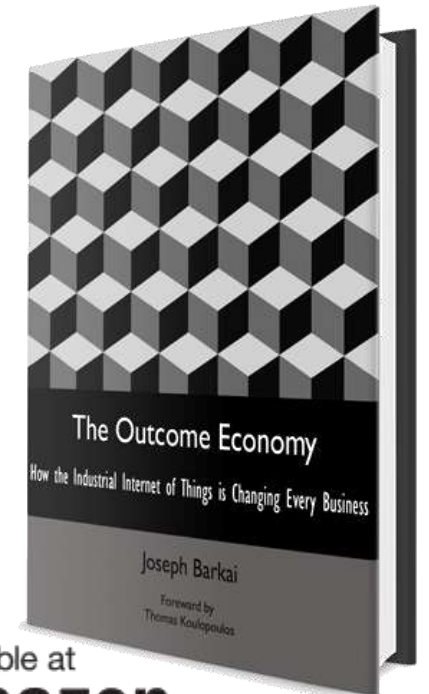
## The World is Connected, Automated, Personalized (and Dangerous?)



@JoeBarkai



Joe Barkai

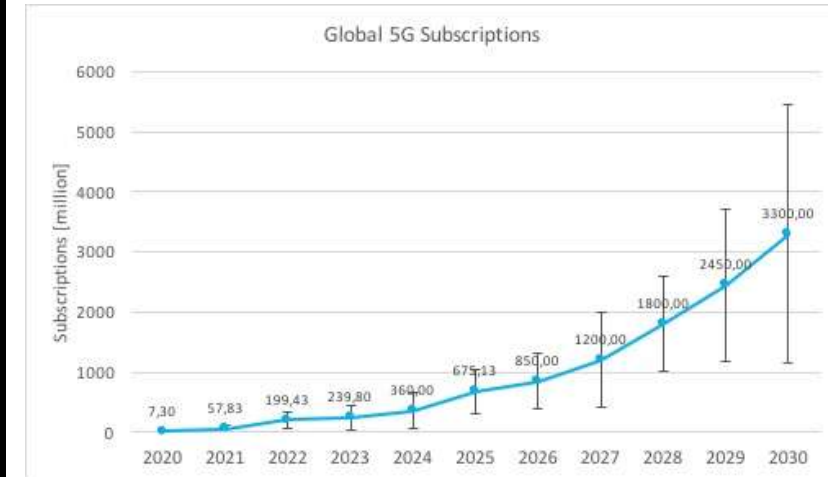


Available at  
**amazon**

# Everything and Everyone is Connected

## Ubiquitous computation

## Lots of data...



Source: Compiled by [edge-of-cloud.blogspot.com](https://edge-of-cloud.blogspot.com)





## Robots and Cobots



The background image shows two white and grey ABB industrial robots in a factory environment. They are positioned over a workbench with various mechanical parts. The robot on the left is in the foreground, and the one on the right is slightly behind it. The ABB logo is visible on the front of the robot in the foreground.

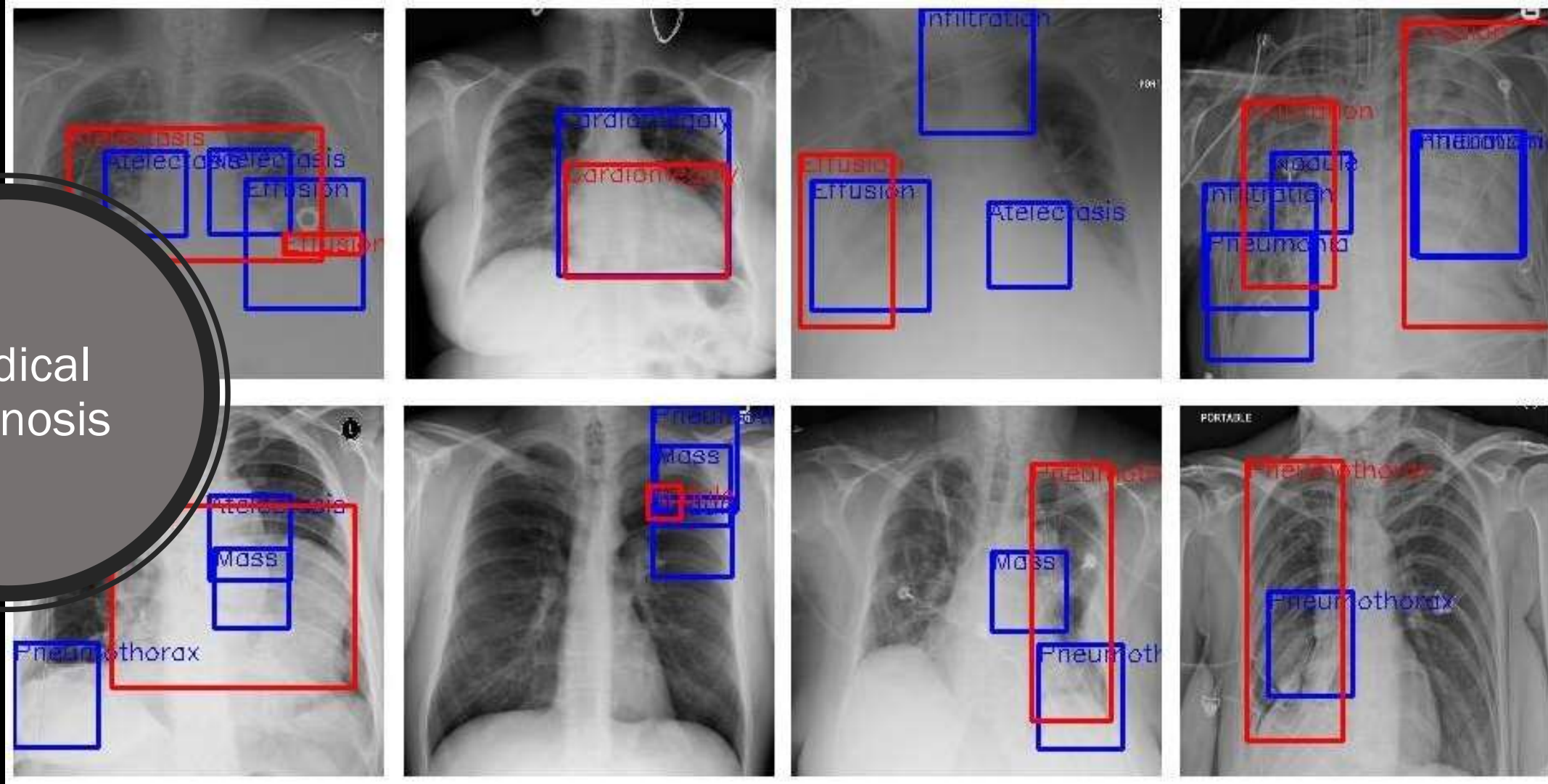
## Adaptive, Self-learning, Self-healing Robots

## Robotic-Assisted Surgery





# Medical Diagnosis



## Autonomous Trucks



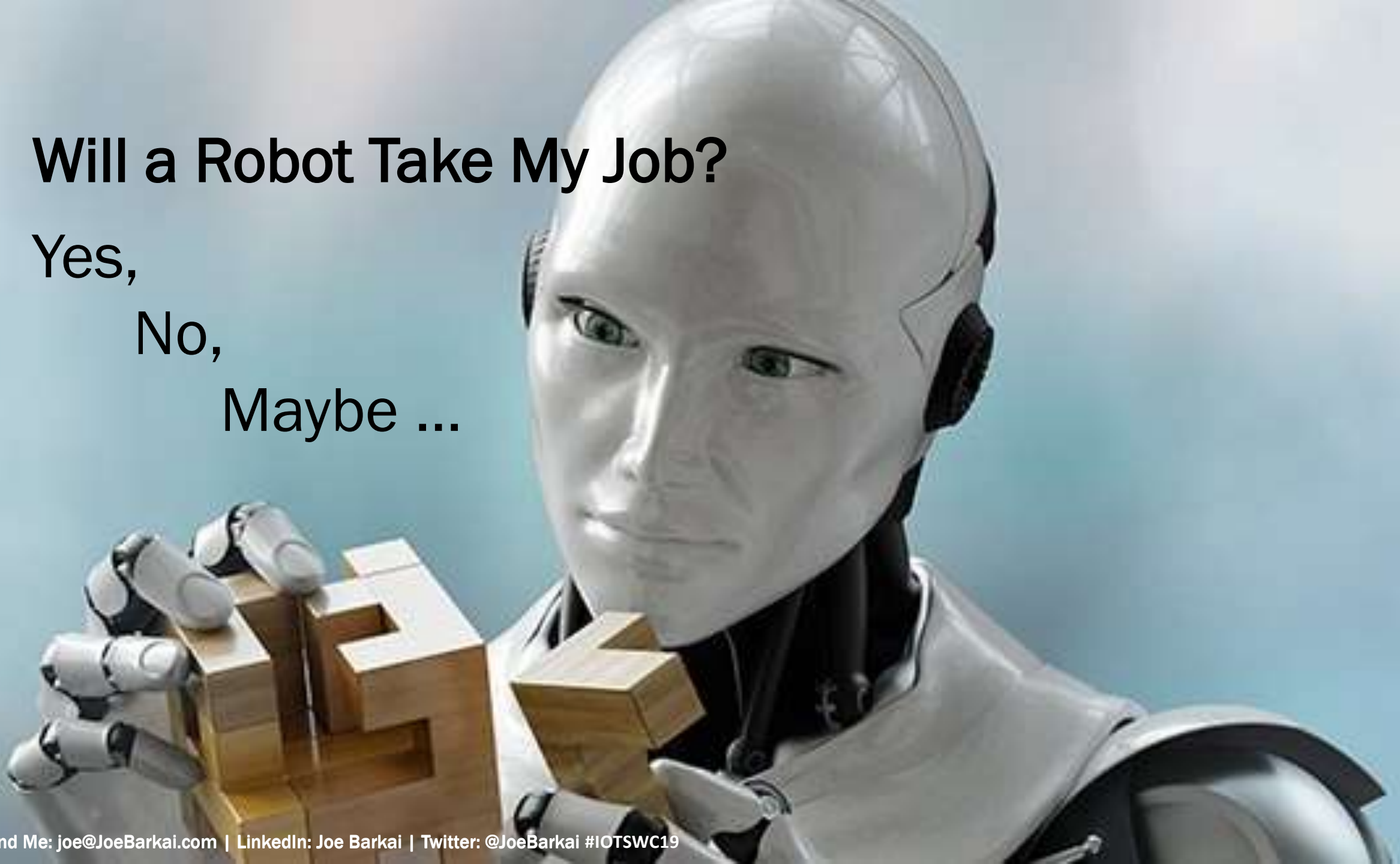


# Will a Robot Take My Job?

Yes,

No,

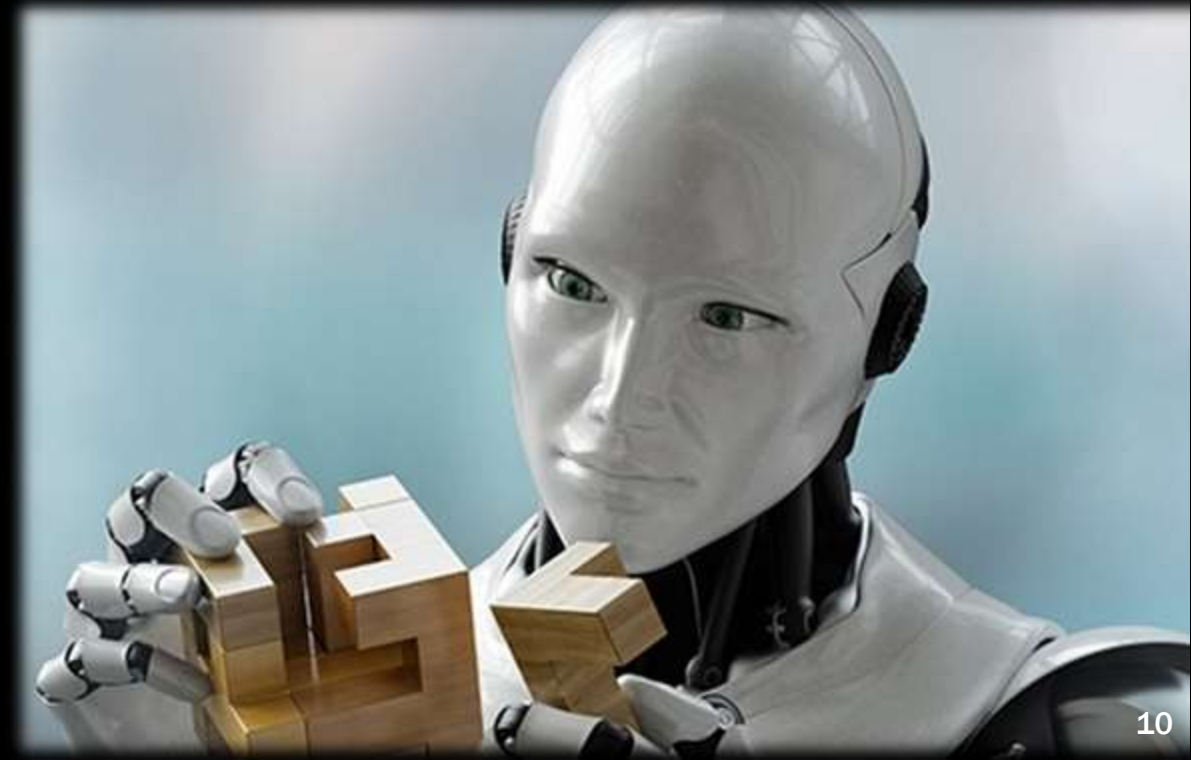
Maybe ...



# When Will Artificial Intelligence Exceed Human Performance?

- 2024: translate languages
- 2026: write high-school essays
- 2027: drive a truck
- 2031: work in retail
- 2049: write a bestselling book
- 2059: work as a surgeon

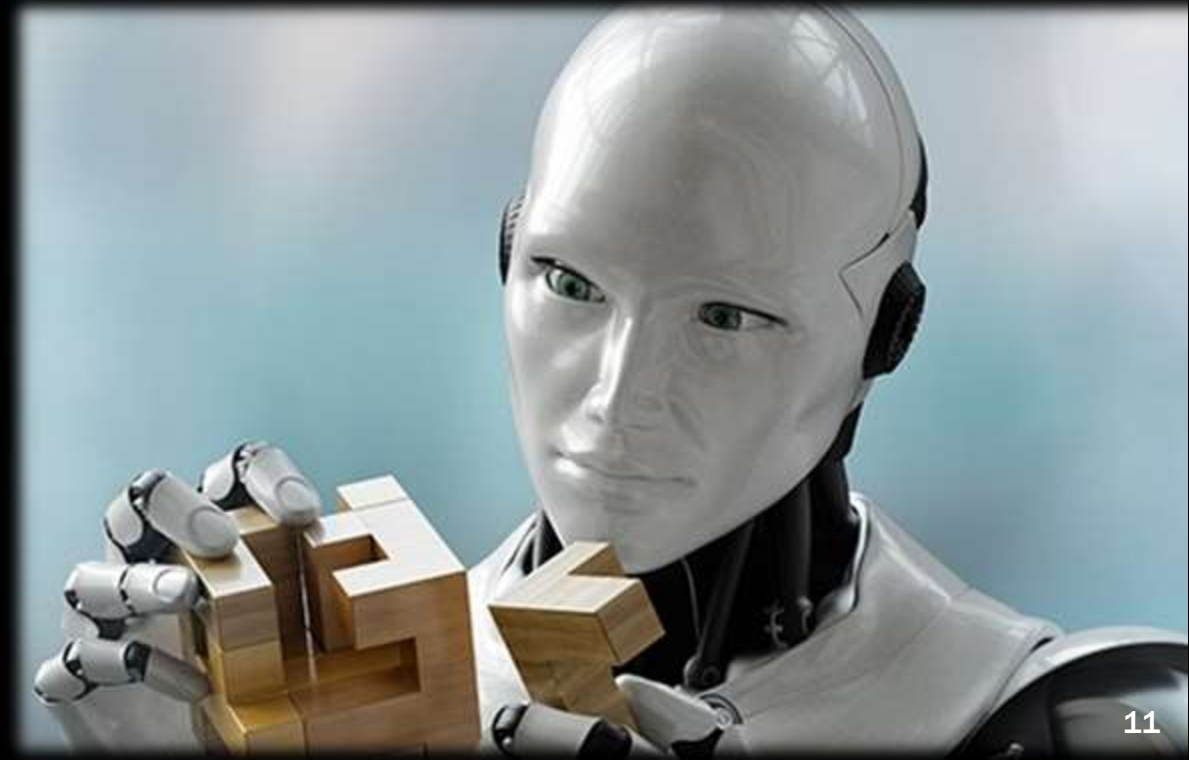
Source: Katja Grace, John Salvatier, Allan Dafoe, Baobao Zhang, and Owain Evans, Future of Humanity Institute, Oxford University, AI Impacts, Department of Political Science, Yale University



# 50% probability:

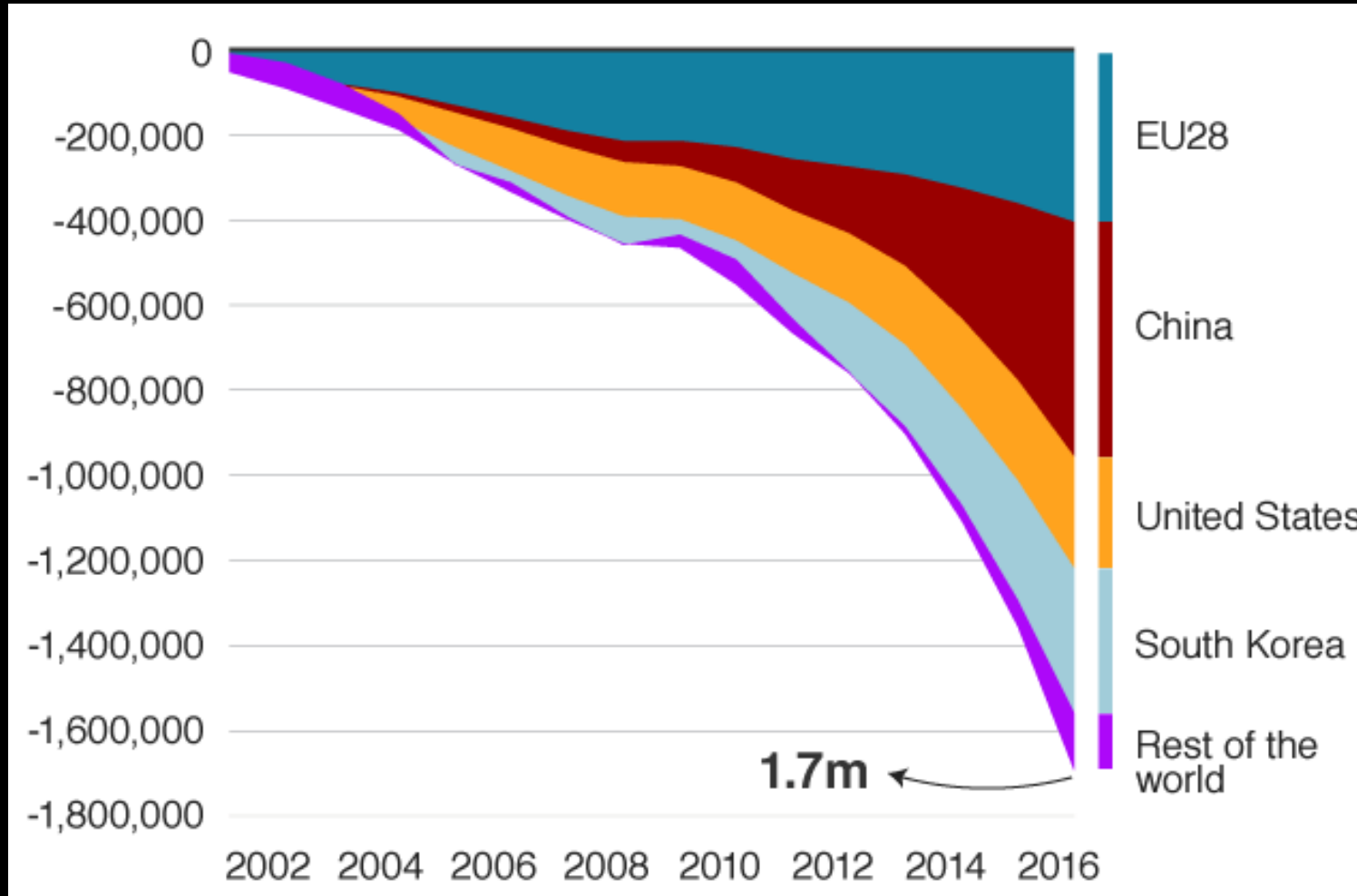
- AI outperforming humans in all tasks in 45 years
- AI automating all human jobs in 120 years

Source: Katja Grace, John Salvatier, Allan Dafoe, Baobao Zhang, and Owain Evans, Future of Humanity Institute, Oxford University, AI Impacts, Department of Political Science, Yale University





# 20 Million Jobs Lost to Automation by 2030



Source: Oxford Economics

# In the Next 20 Years

## Going Away...

- Travel Agents
- Drivers and logistics/supply chain
- Cashiers
- Postal workers
- Bank tellers
- Dispatchers
- Librarians
- Farmers
- Sport referees

## Likely to Stay for a While...

- First-Line supervisors of mechanics, installers and repairers
- Emergency management directors
- Dietitians and nutritionists
- Mental health and substance abuse social workers
- Orthotists and prosthetists
- Physicians and surgeons
- Occupational & physical therapists
- Educating children
- Caring for the elderly

# Better Chance of Survival in the New Job Market?





# From Big Data to Hyper-personalization

# Hyper Personalization

- Situational awareness
- They know before you know
- Customize products and sales campaigns without you being aware



You Are Not The Customer  
You Are The Product!

Your Preferences and Experience are  
Product Features  
and  
Competitive Differentiator



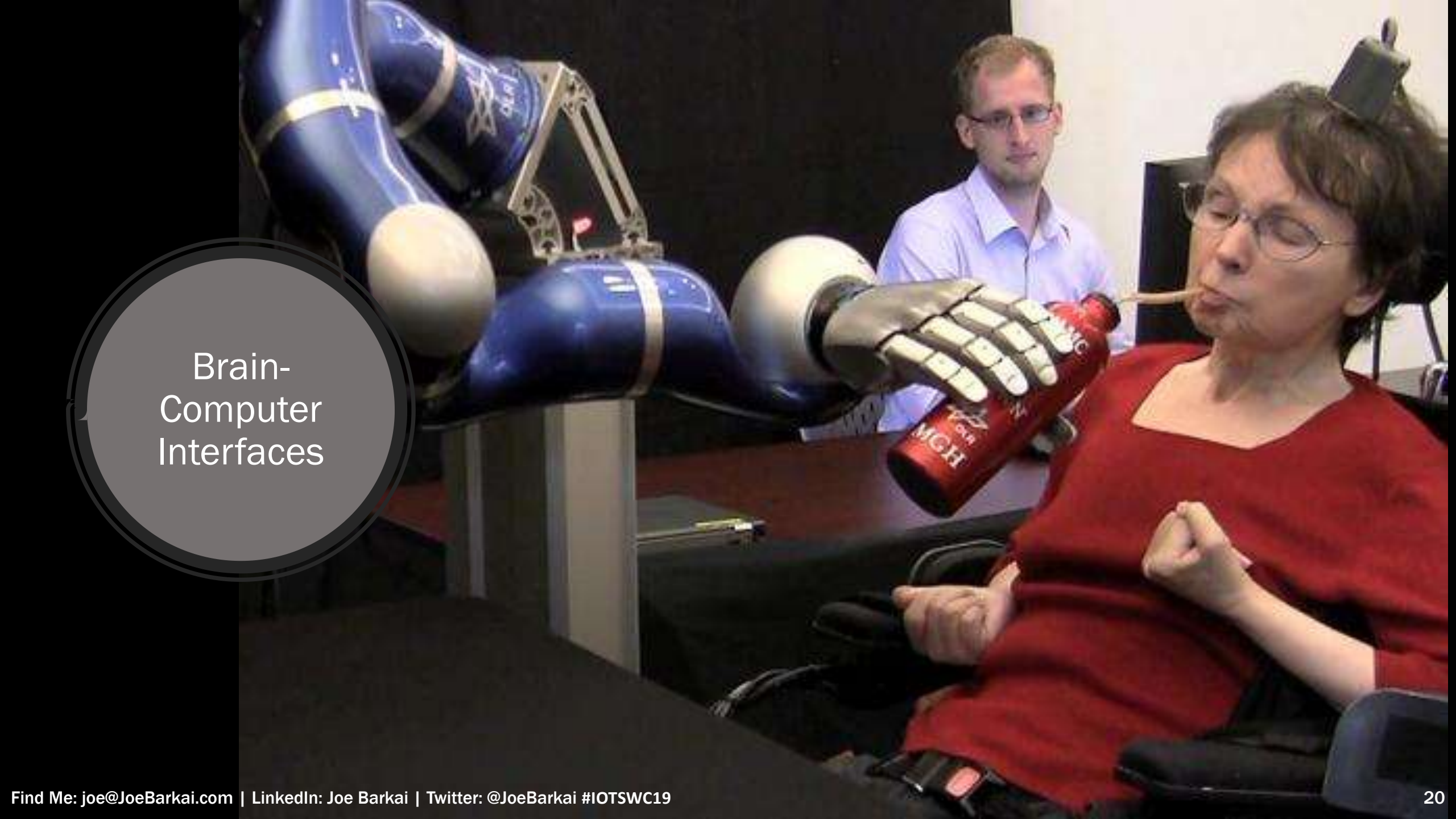
A close-up photograph of a laboratory setting. A hand wearing a blue nitrile glove holds a test tube containing a red liquid, likely blood. The test tube has a white label with a barcode. In the background, a white rack holds several other test tubes with different colored caps (blue, orange, green) and some containing red liquid. The scene is brightly lit, suggesting a clinical or research environment.

## Personalized Medicine

# Personalized Medicine

- Specific diagnosis and optimal therapies
- Better antibiotic choices and fewer drug side-effects
- Fighting cancer with patient's own immune system
- Stopping Alzheimer's, Parkinson's, MS, ...
- Diagnosing rare diseases



A woman with glasses and a red shirt is seated, wearing a head-mounted device. A blue and white robotic arm is positioned in front of her, holding a red can of M&M's candy. The arm is controlled by her brain activity, as indicated by the text overlay. A man in a light blue shirt stands behind her, observing the experiment. The background is a dark room with a white wall.

## Brain- Computer Interfaces

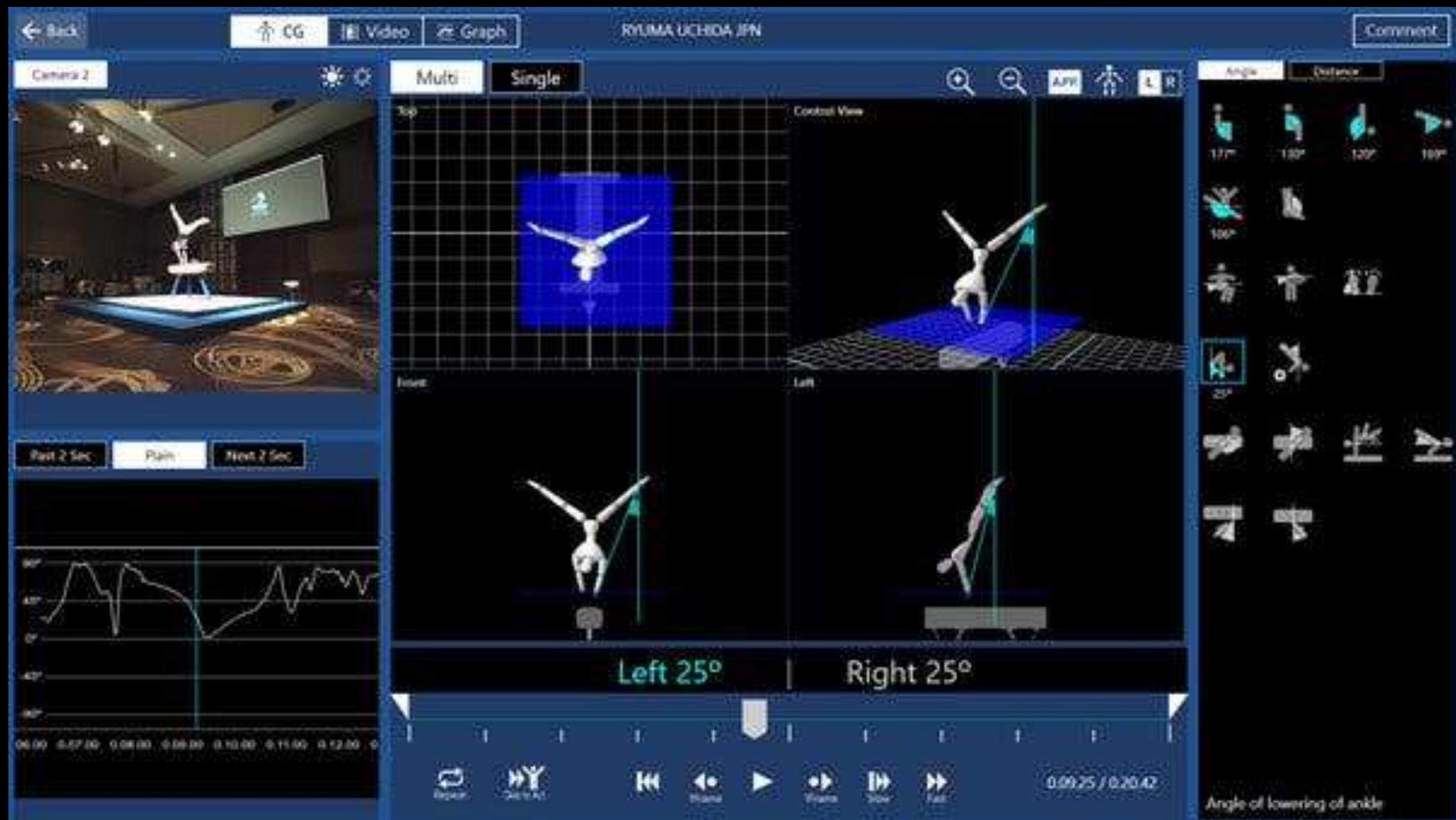


## Extreme Bionics







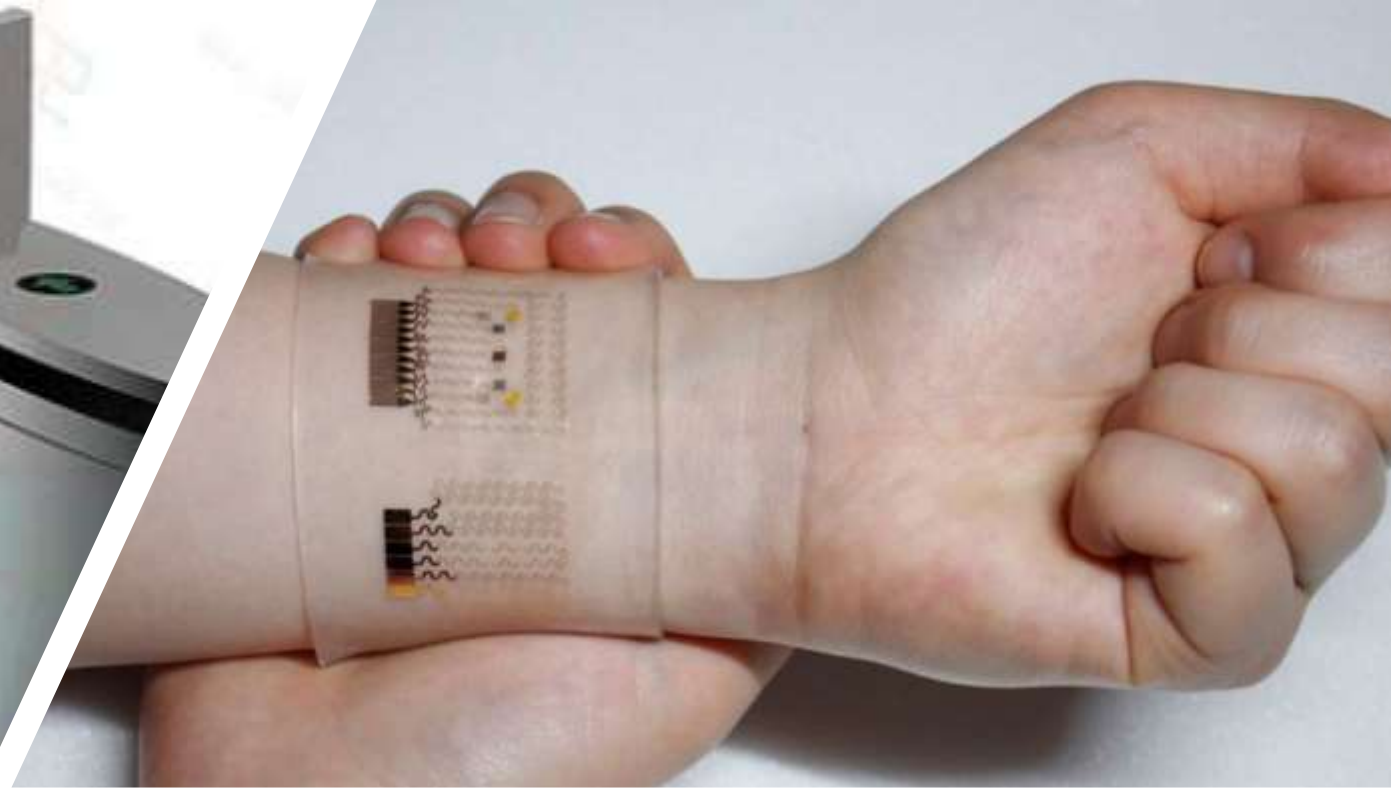


Source: Fujitsu

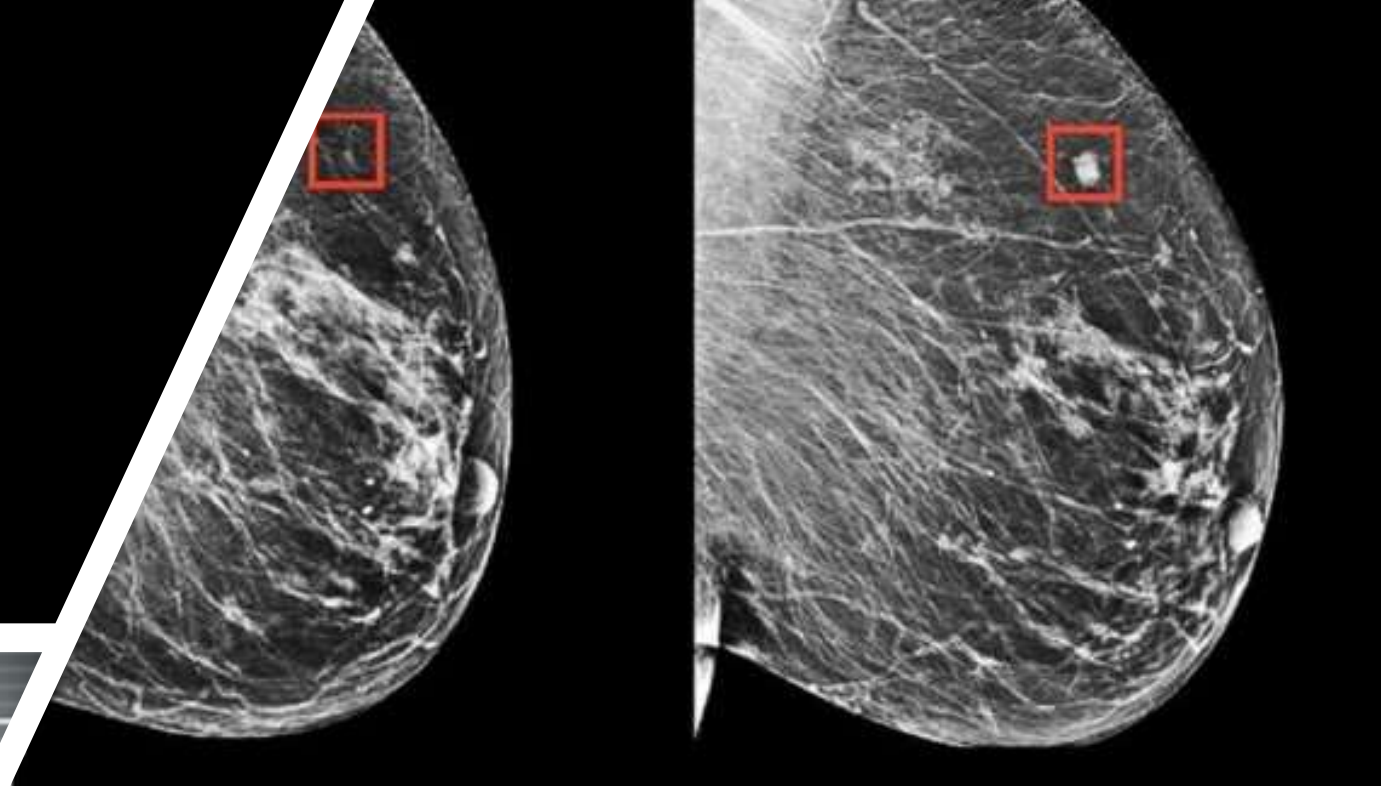
It's 2030

Life is Managed by Algorithms!









[ MATCH ]

**MATCH MADE**

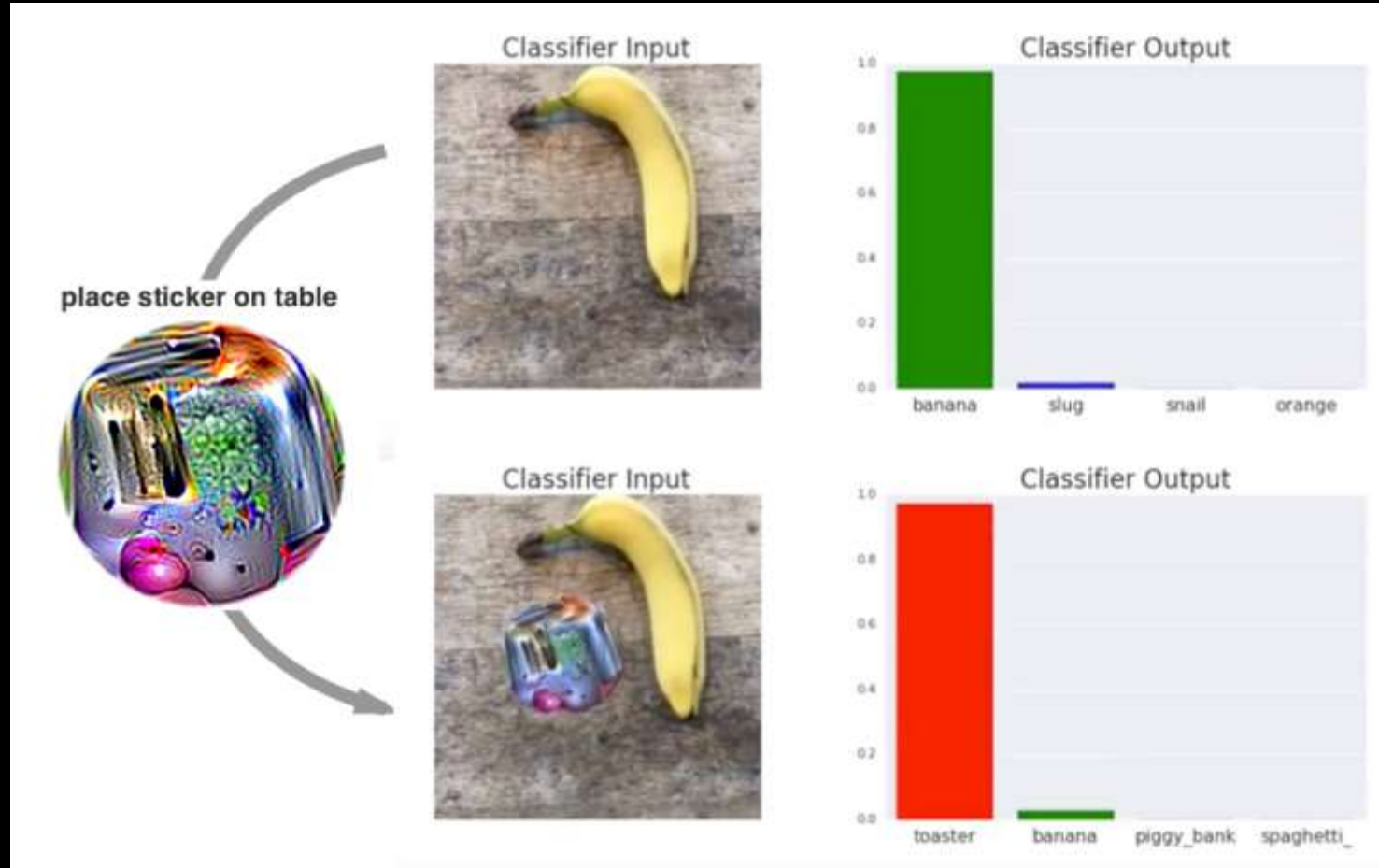
ENROLLED PHOTO	LAST MATCH	NAME
		ANDREA CANDIAN
		DOB: 01/10/1984
		SEX: MALE
		DOB/D4/2012
		STATUS: ACTIVE
		LOCATION: LONDON UK

PROR. RECOGNITION **match 98%**

REF NO. 00000000000000000000

00000000000000000000





Source: Tom B Brown, et al

# Revealing the Invisible







Ad related to latanya sweeney ⓘ

**Latanya Sweeney Truth**

[www.instantcheckmate.com/](http://www.instantcheckmate.com/)

Looking for **Latanya Sweeney**? Check **Latanya Sweeney's** Arrests.

Ads by Google

**Latanya Sweeney Arrested?**

1) Enter Name and State. 2) Access Full Background Checks Instantly.

[www.instantcheckmate.com/](http://www.instantcheckmate.com/)

**Latanya Sweeney**

Public Records Found For: **Latanya Sweeney**. View Now.

[www.publicrecords.com/](http://www.publicrecords.com/)

**La Tanya**

Search for La Tanya Look Up Fast Results now!

[www.ask.com/La+Tanya](http://www.ask.com/La+Tanya)

**checkmate** DASHBOARD EDIT ACCOUNT INFO LOGOUT

**LATANYA SWEENEY**  
1420 Centre Ave  
Pittsburgh, PA 15219  
DOB: Oct 27, 1956 (68 years old)

**Criminal History** Rate This Content: ☆☆☆☆

This section contains arrest, citation, arrest, and criminal records for the subject of this report. While our database does contain hundreds of millions of arrest records, different courts have different rules regarding what information they will and will not release.

We share with you as much information as we possibly can, but a clean slate here should not be interpreted as a guarantee that Latanya Sweeney has never been arrested. It simply means that we were not able to locate any matching arrest records in the data that is available to us.

**Possible Matching Arrest Records**

Name	County and State	Offense	View Details
No matching arrest records were found.			

**Personal**  
Name, aliases, nicknames, phone numbers, etc.

**Location**  
Current address, history and recent data, maps, etc.

**Related Persons**  
Known family members, business associates, roommates, etc.

**Marriage / Divorce**  
Marriage and divorce records on file.

**Criminal History**  
Arrest records, speeding tickets, mugshots, etc.

**Licenses**  
FLA license, OHIO license, Ohio License, etc.

**Sex Offenders**  
Sex offenders living near Latanya Sweeney's primary location.

“

“Humans don’t realize how biased they are until AI reproduces the same bias.”

John Shawe-Taylor, First AI Chair of UNESCO

“

## **Vera makes a selection of the most appropriate candidates**

Vera can make a perfect selection from job sites or your own database in a few minutes

## **Vera calls the candidates or answers their calls**

Vera screens candidates, gives out vacancy details, asks the necessary questions & answers candidates' questions

”







# Anonymity Frees Us from Accountability

- Deep fake videos
- Voice “skins”
- “Traditional” crime will be lower
- But at cost ...
- ... and others will increase



# Recreating

The Past ...

The Present ...

The Future ...







# Needed: An Open Discourse

Between

Engineering community and AI service providers  
and

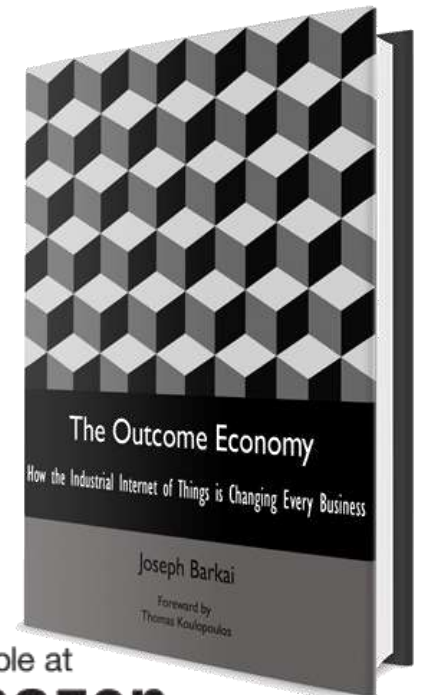
Policymakers, social scientists, legal experts and concerned citizens

- Ethical decision-making
- Algorithmic transparency
- Responsibility and liability
- Employment law and Universal Minimum Income
- Shared best practices
- Standards and common platforms



# To Continue the Conversation

(and request the presentation slides)



Available at  
**amazon**