

# The Future of Work

How to Amplify Human  
Potential in the 4th Industrial  
Revolution

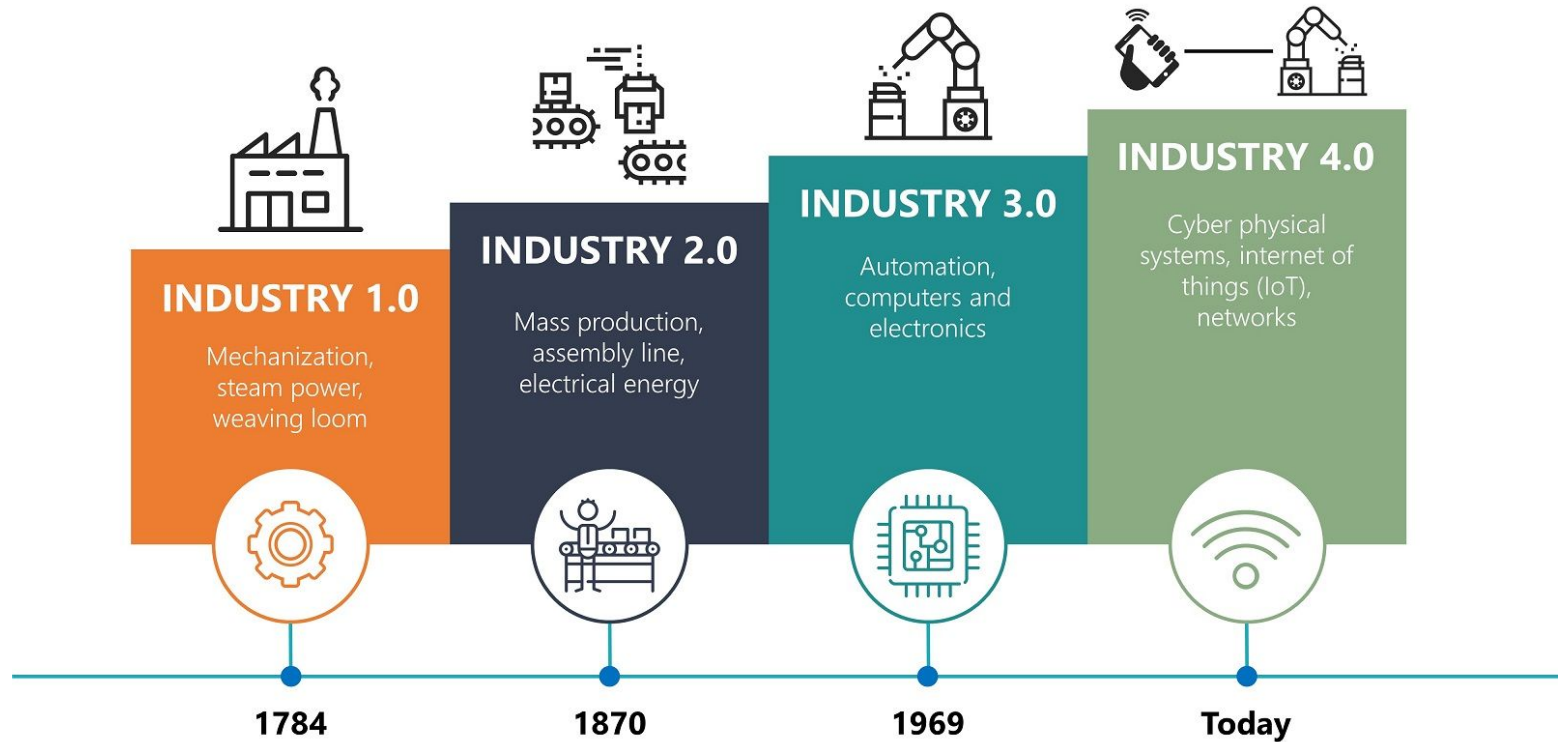


**DR. AYESHA KHANNA**

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What is machine learning?





Source: <https://www.youtube.com/watch?v=SCGV1tNBoeU>



AI allows  
computers  
to help us  
do three  
things.

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MACHINES CAN DO  
**REPEATABLE ROUTINE  
TASKS** FOR US.



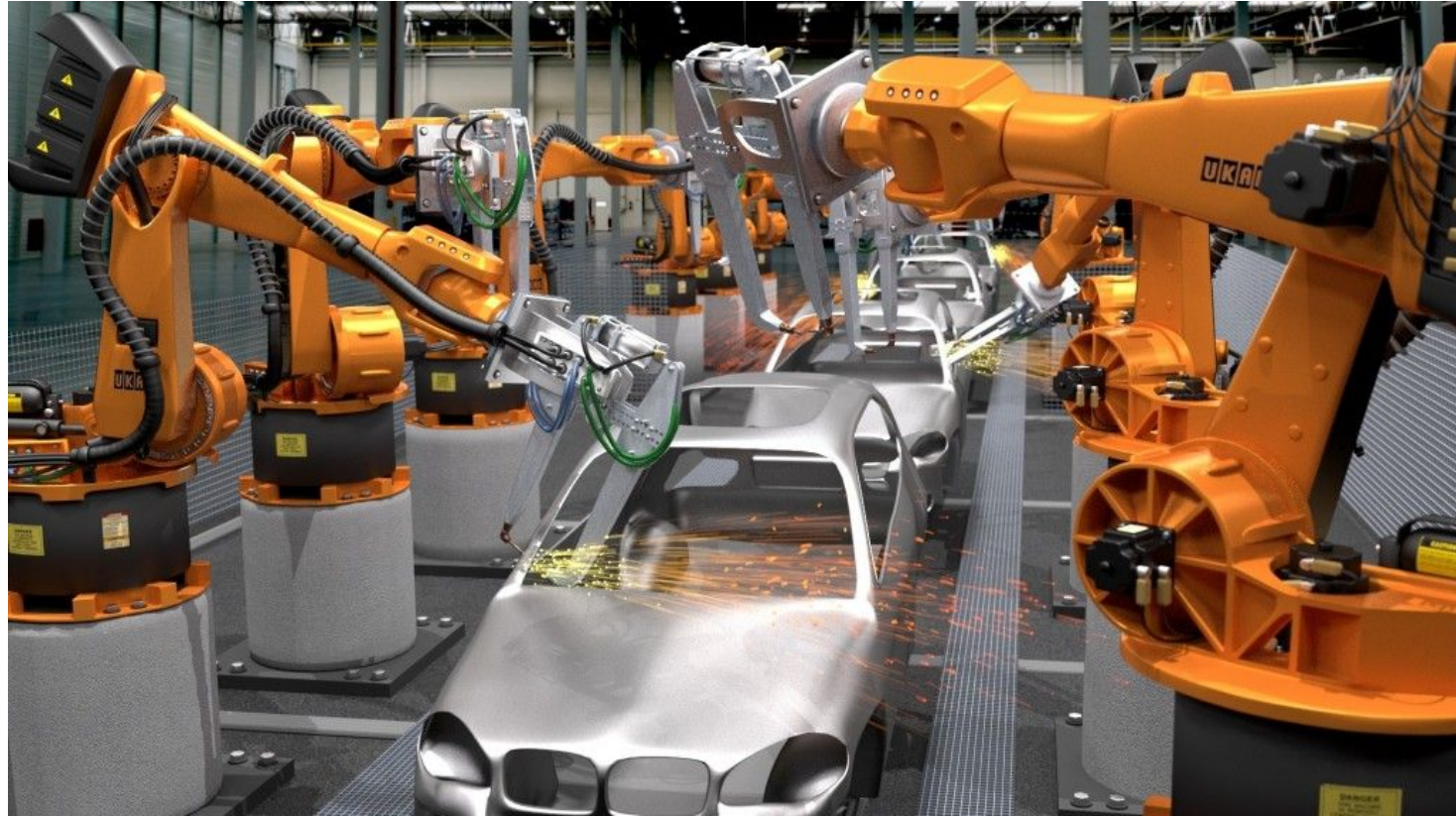
MACHINES CAN ANALYZE  
**HUGE AMOUNTS OF  
DATA** FOR US.



MACHINES CAN USE DATA  
TO **ACT, MAKE  
PREDICTIONS, AND GIVE  
RECOMMENDATIONS.**



# Machines can do repeatable tasks





The way we live will be radically different  
with digitisation.

China's planned hyper-local Xiong'an city is an example of a post-pandemic city.

## China is building a high-tech 'COVID-proof' smart city designed for future lockdowns

Rachel Hosie Sep 10, 2020, 7:53 PM



**All the buildings in the smart city will have sloping roofs with solar panels.** Guallart Architects

Source:  
<https://www.insider.com/china-building-covid-proof-smart-city-designed-for-future-lockdowns-2020-9>



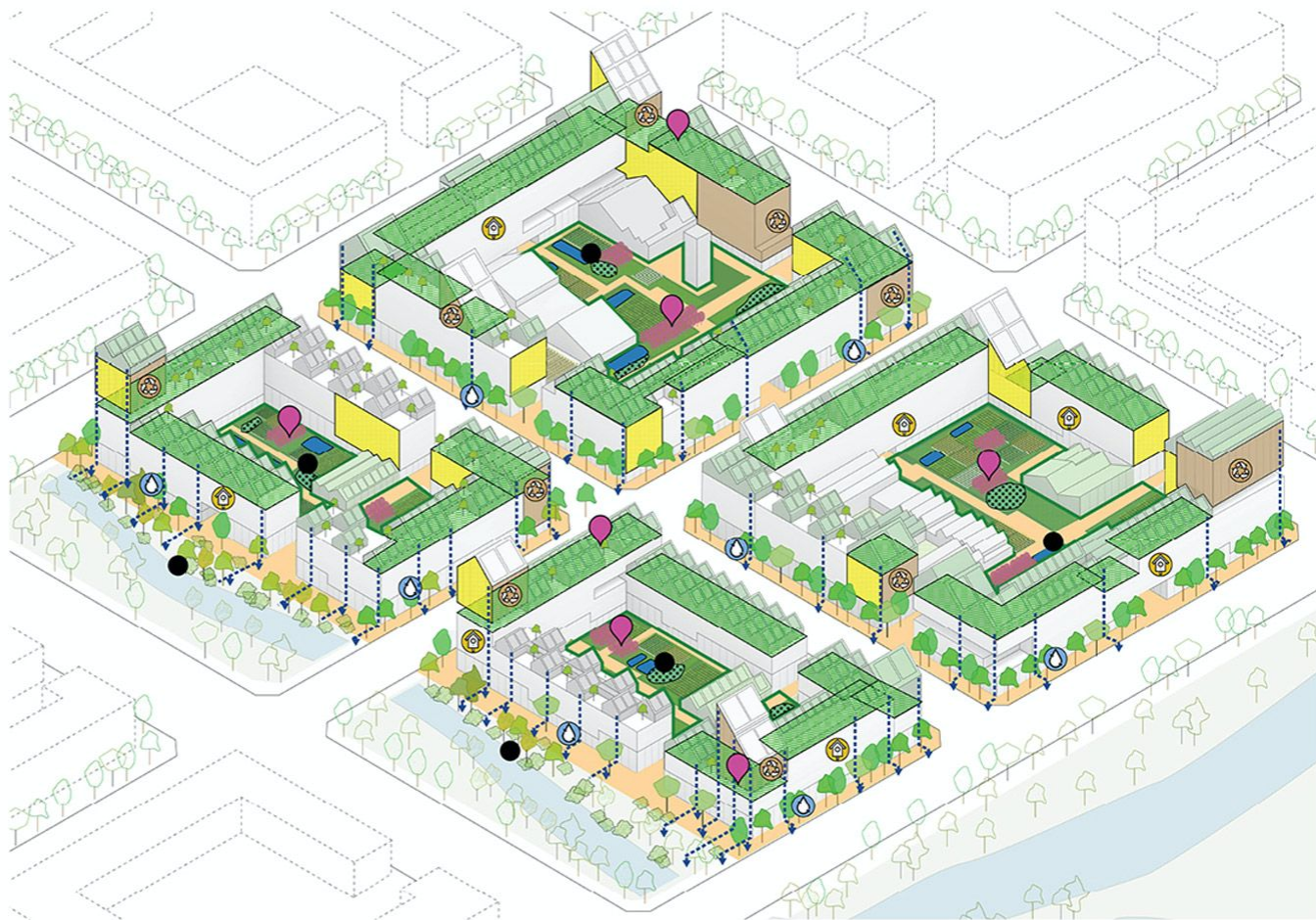
# RESILIENT NEIGHBORHOOD

## 弹性居住区

-  Green courtyards  
绿色院落
-  Agriculture  
农业
-  Permeable and semi-permeable paving areas  
渗透性和半渗透性铺装
-  Moist biotopes in the courtyards  
院内潮湿生物群落
-  Shrubs with berries  
浆果丛
-  Vertical garden facade  
立面垂直花园
-  Birdbox in each apartment  
每户鸟巢
-  Intensive and extensive green roofs  
集中大面积屋顶
-  Only recyclable construction materials  
仅使用可循环建筑材料
-  Wildlife habitat  
野生动植物栖息地
-  Storm water retained and infiltrated  
雨水储存和渗入
-  Open water in ponds  
开放水塘
-  Native planting  
本地植物



GREEN ROOF COVERAGE









Treated wood is a better alternative.

W50 in Japan will be 70 stories high and made of 90% wood.





Terraces for drone deliveries.

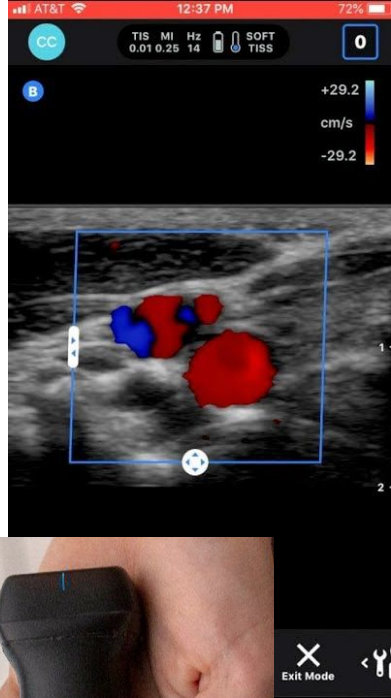
Source:  
<https://www.wired.com/2016/08/time-fancy-apartments-offer-balconies-drone-landings/>



Physical spaces will be dynamic with digital innovations.



Open your minds.  
Imagine one space  
becoming anything  
else.



Sustainability will be paramount and new townships like Tengah will be car-free with cold water chilled using solar power used for cooling.





Volocopter will  
launch its air taxi  
services in  
Singapore in  
2024.



Source:  
<https://techwireasia.com/2022/02/volocopter-to-launch-commercial-air-taxi-services-in-singapore/>



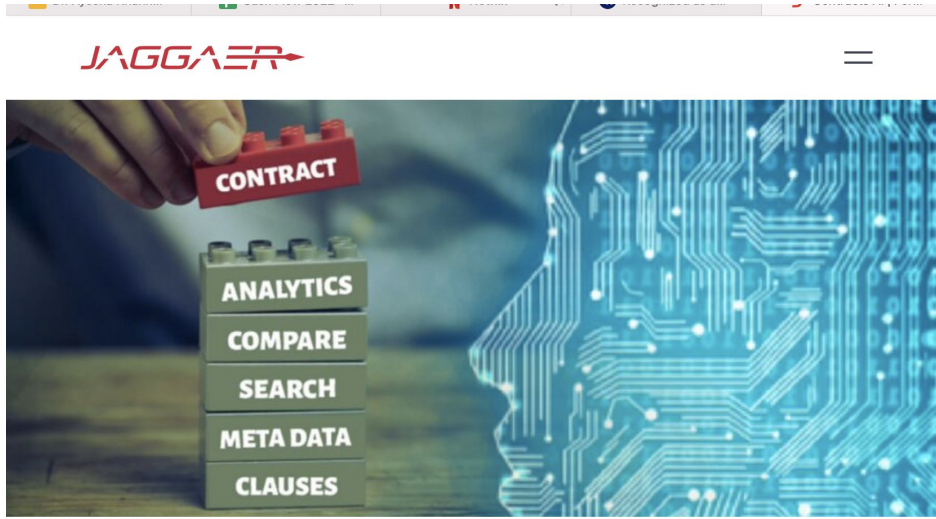
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**Data and AI will  
transform how we  
work**



Automatically fill out paperwork

# AI supports you throughout the legal contract process

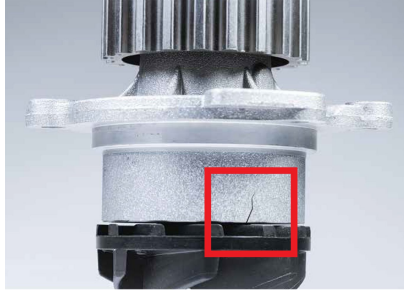


## JAGGAER Contracts AI

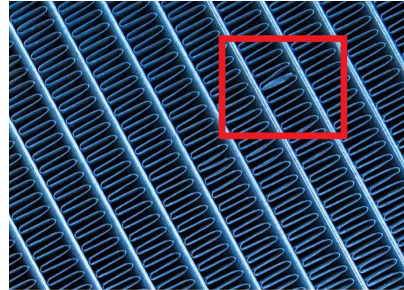
Contract analysis powered by AI, ML and OCR capabilities.

Startups like Landing AI are using computer vision to automatically detect any defects.

By training the AI to recognise defects through examples, Landing AI makes it easier for factories to manage quality control. Example, automotive industry.



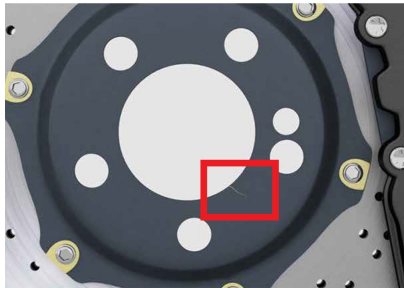
Crack inspection



Radiator inspection



Leak detection



Robots now check locations for  
safety



## Drones for aerial inspection and collection of data.



Over 2 million commercial drones will  
be flying worldwide by 2020  
(Gartner)

Sabir uses drones to  
carry out visual and  
thermal inspections.

# ANYMal is sent for the most dangerous missions.

visual and thermal cameras  
microphones  
gas detection sensors

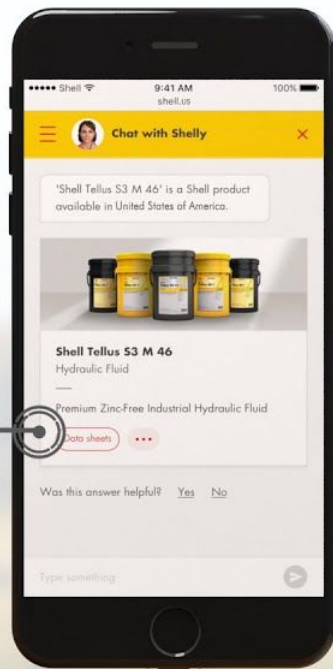


Source: <https://www.offshore-technology.com/features/robotics-oil-gas/>



Source: <https://www.youtube.com/watch?v=DzTvlPrt0DY>

AI should help assist my  
customers and partners.



# Shell Virtual Assistant

Speaks different languages

Available in 150 countries

Knows details of 3000 products and 16,500 features

**“where to buy lubricants, what pack sizes are available and give information about product technical properties.”**



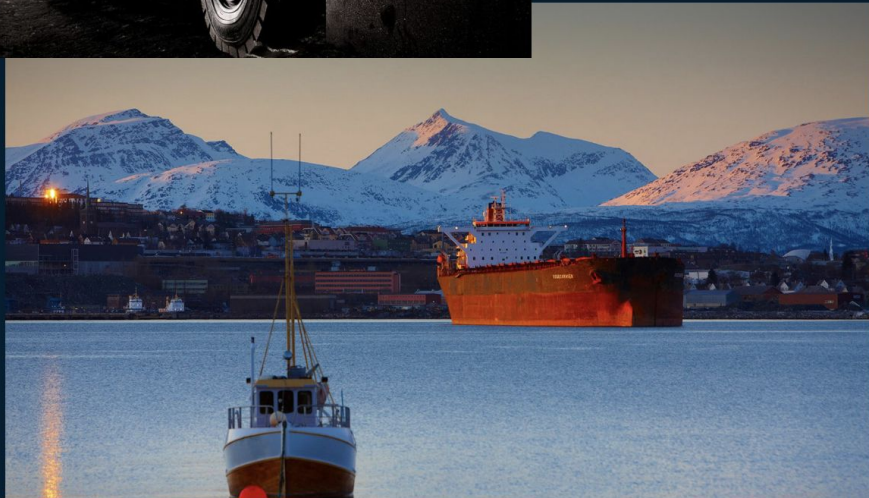


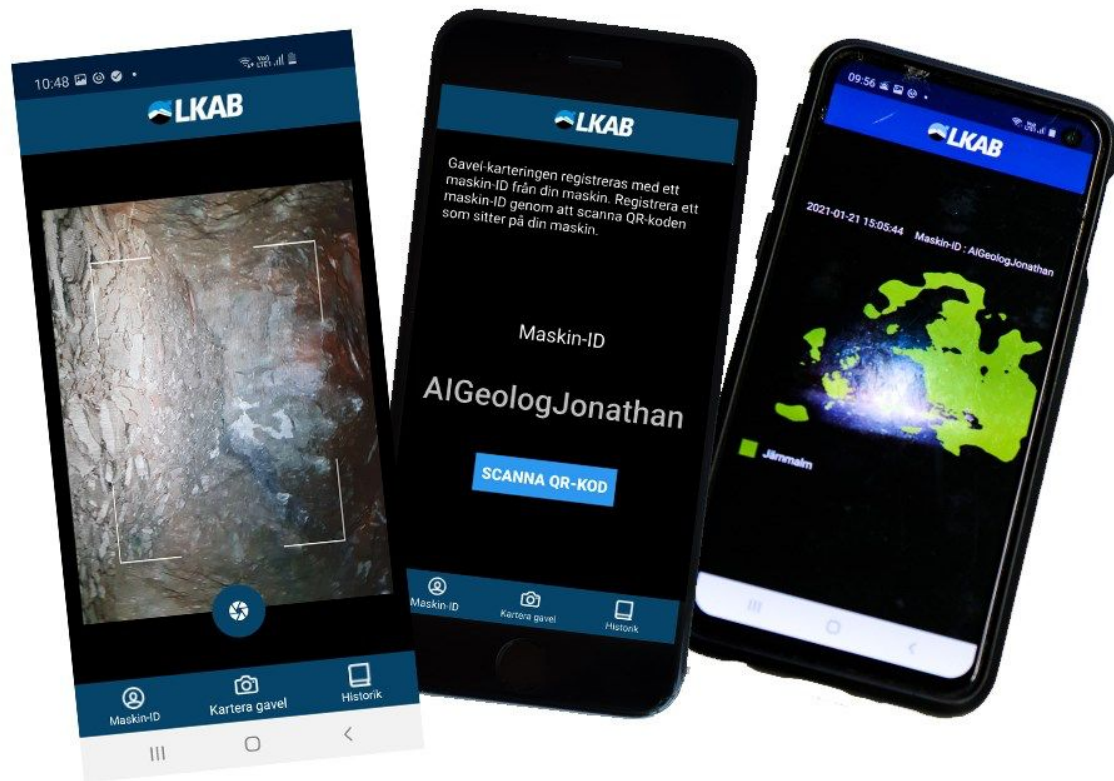
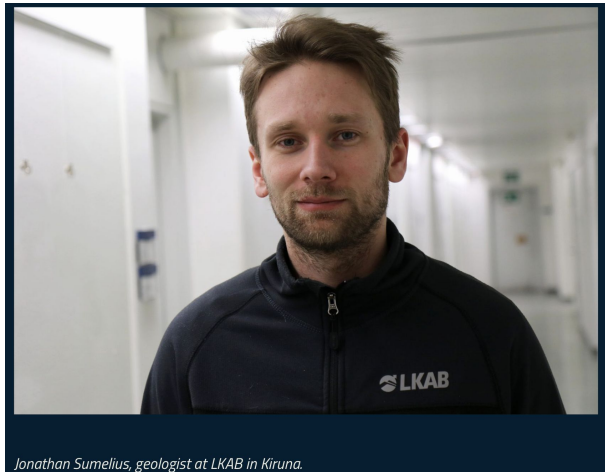
Source: <https://www.shell.com/business-customers/lubricants-for-business/news-and-media-releases/2018/shell-launches-ai-chatbot.html>


Geologists are also starting to use AI tools for efficiency and accuracy.



LKAB is Europe's largest iron ore producer and uses AI for geological mapping.







We will be able to work better with our  
teammates





Source: Amazon

Fully Charged

# Amazon's New Wearable Will Know If I'm Angry. Is That Weird?

By Austin Carr

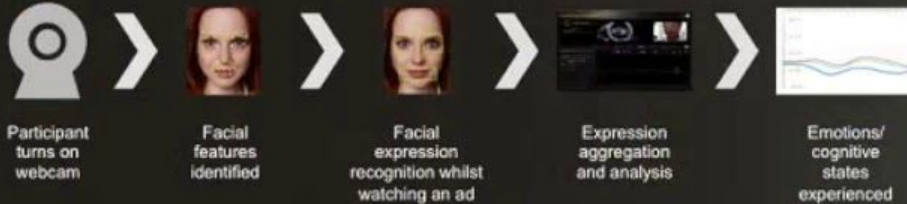
August 31, 2020, 6:45 AM EDT

Source:

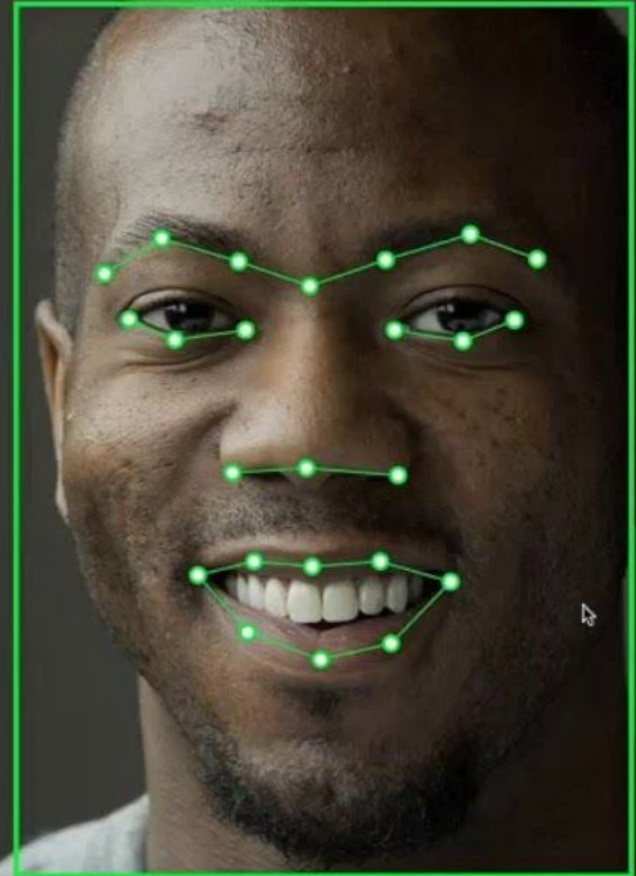
<https://www.bloomberg.com/news/newsletters/2020-08-31/amazon-s-halo-wearable-can-read-emotions-is-that-too-weird>

## Emotion AI can help us understand pre-conscious emotional responses to ads

**Records faces from webcams in natural settings.**  
**Unobtrusive, scalable and easy**



**The system codes for an array of expressions most relevant to advertising**




Employee analytics and monitoring.

Aware just raised \$60m  
for its platform that  
analyzes employee  
behavior across  
messaging platforms like  
Slack, Zoom and emails.

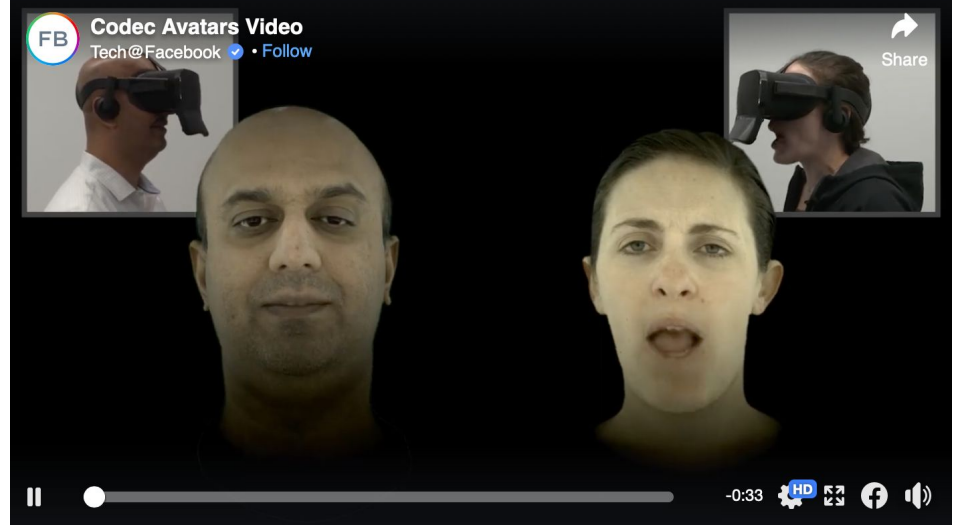






We will be able to live, work and play more easily in the “Metaverse”

Work collaboration from anywhere with “social presence” in avatars and sound projections.



**There were 3.21 billion gamers  
in the world in 2021**

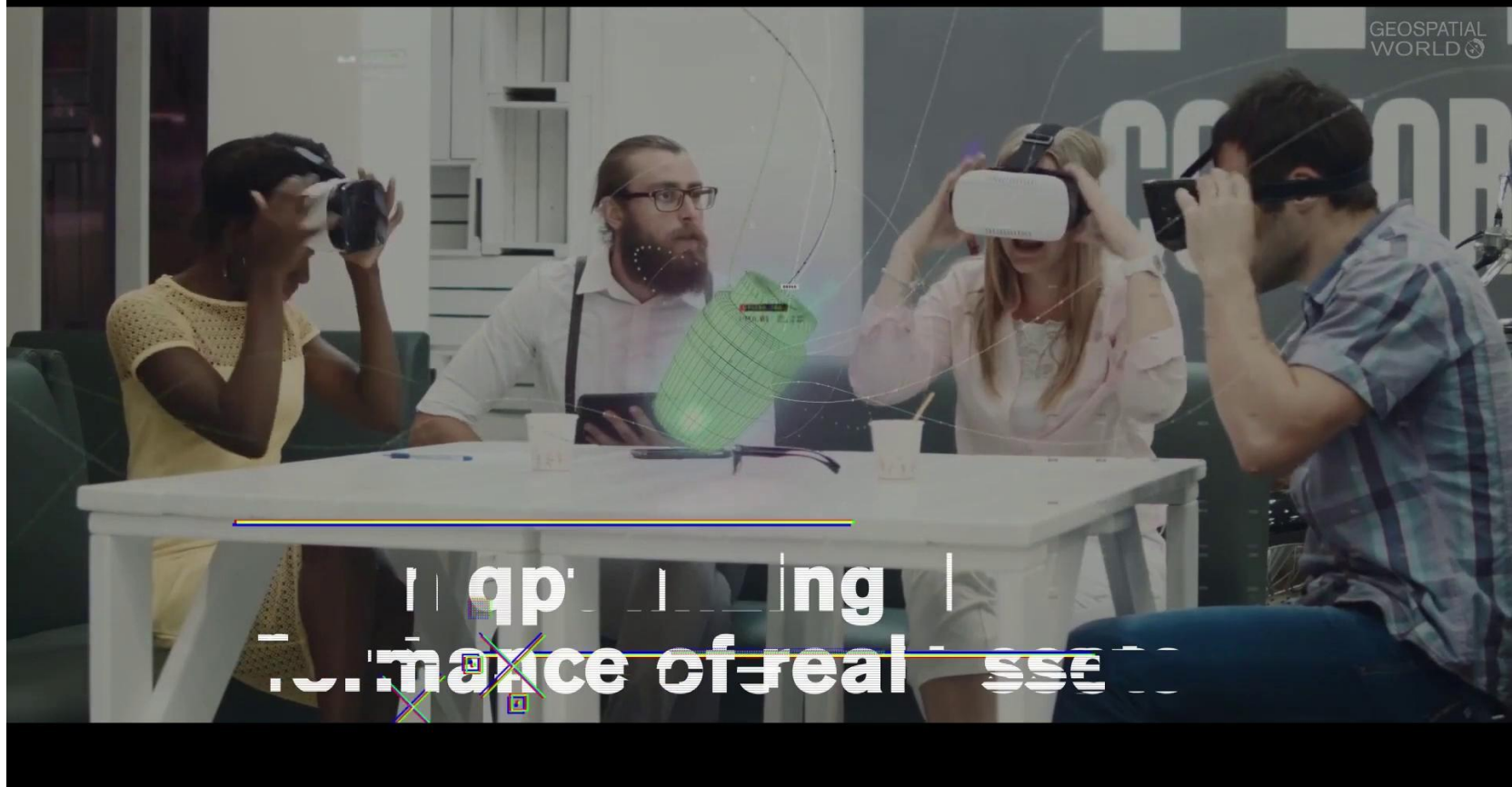
Gaming and the Metaverse are a match made in heaven.





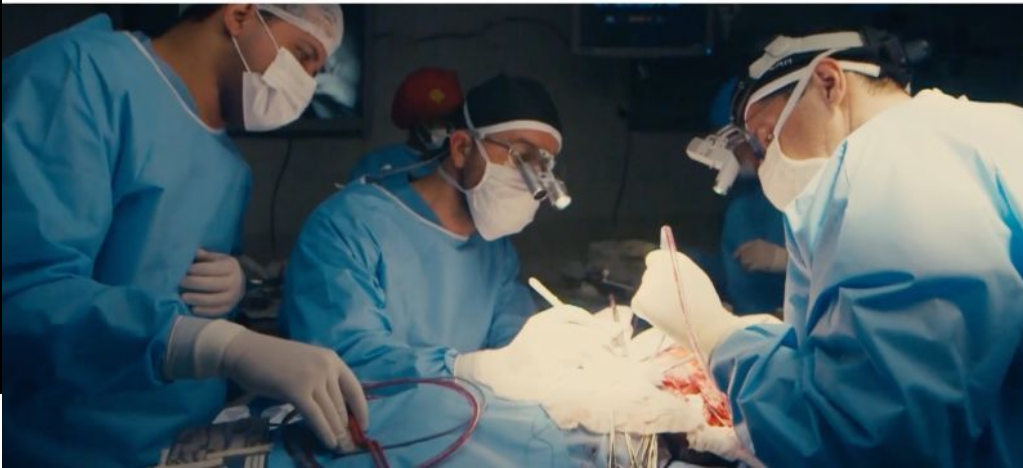
**A digital twin is a  
virtual representation  
of an object and how  
it behaves.**





improving the  
performance of real-time

**Digital Twins enable test-bedding and decision-making through a combination of data and AI, and by 2023, 33% of industrial operators will use them (Gartner).**



Arthur and Bernardo

2 little boys  
27 hours of surgery  
100 medical staff  
0 room for mistakes

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Dr. Owais Jeelani

Virtual Reality was used by cross-continental surgeons simultaneously to simulate different surgical strategies using data and images gathered from MRIs and CT Scans of the two boys.

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Source:

<https://www.roadtovr.com/vr-surgery-success-conjoined-twins/>

A new way to do training. According to the book Essential Surgery, over 7 million people suffer complications following surgery each year, including at least 1 million deaths.



The Geological professionals industry can use the Metaverse to train professionals



source:

<https://venturebeat.com/business/look-uses-hololens-augmented-reality-to-visualize-3d-landscapes/>



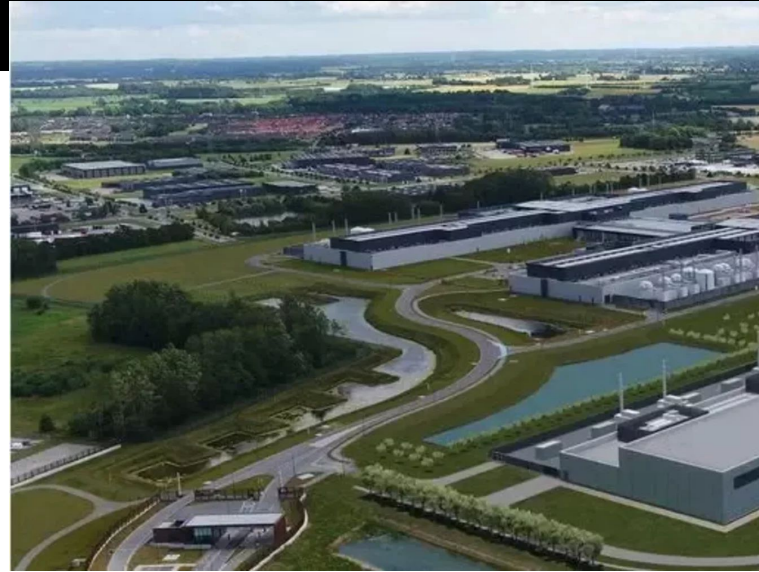
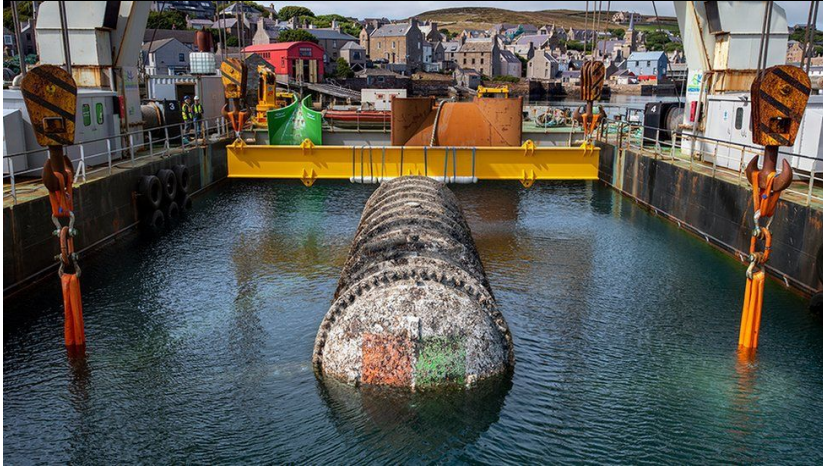
But with great power comes great responsibility.



Around 1 percent of global electricity is used to power data centers. This will only increase as we produce and consume every more data.



# Immersive cooling and reuse of energy waste (Facebook heats almost 7000 homes in Denmark).



source: <https://www.akcp.com/blog/liquid-immersion-cooling-a-journey-to-better-cooling/>  
<https://www.datacenterdynamics.com/en/news/facebook-begins-data-center-and-district-heating-expansion-odense-denmark/>

Google uses AI to make its data centers twice as efficient and produce six times the computing data with the same amount of energy as compared with five years ago.





**Your computer has been infected!**



Your documents, photos,  
databases and other important files  
encrypted



To decrypt your files you need to  
buy our special software -  
[REDACTED]-Decryptor



Follow the instructions below. But remember that you do not have much time

- Decryptor price

You have 6 days, 23:59:40

\* If you do not pay on time, the price will be doubled

Time ends on Jul 9, 19:09:53

Current price 213.23496134 XMR  
≈ 44,999 USD

After time ends **426.46992268 XMR**  
 ≈ 89,998 USD

Monero address:

\* XMR will be recalculated in 5 hours with an actual rate.

Revil ransom note seen by victims of the ransomware attack involving Kaseya's software  
(Source: Cisco Talos)

“On May 30, it forcibly encrypted systems at the U.S. operations of Brazil-based meat processing giant JBS, which paid the attackers a ransom worth \$11 million in exchange for a decryption key and a promise to not leak stolen data. “



# Smile, Your City Is Watching You

Local governments must protect your privacy as they turn to “smart city” technology.



THE NEW YORK TIMES

A Wi-Fi access point on a streetlight in downtown Kansas City. When Kansas City's 2.2-mile (3.5km) streetcar line was under construction, it also installed fiber optic cable and electronic sensors to monitor traffic, as well as 25 tourist information kiosks, public Wi-Fi and surveillance cameras.

## CCTV

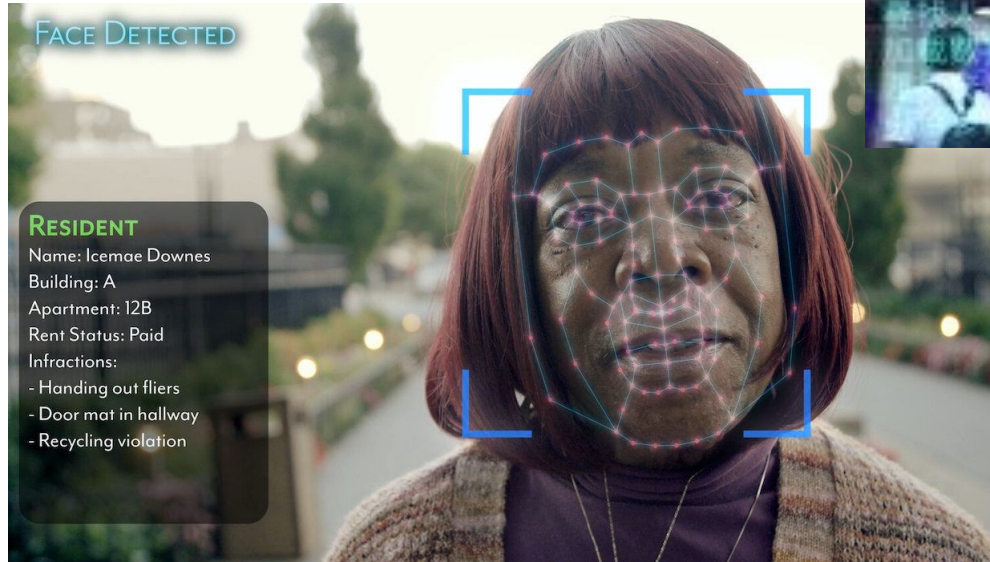
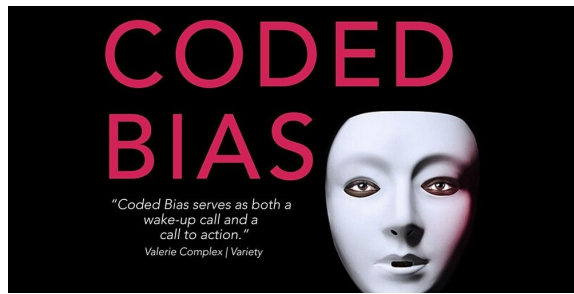
Security cameras monitor activity in public areas with the goal of preventing crime.

## STREETLIGHT SENSORS

Monitor weather and daylight conditions to dim and brighten to appropriate levels. Streetlights can also be equipped with sensors to monitor air quality, noise or pedestrian traffic.

: Aïda Amer/Axios

<https://bit.ly/2ti7siB>





TECHTANK

## The EU path towards regulation on artificial intelligence

Valeria Marcia and Kevin C. Desouza · Monday, April 26, 2021

Those who do not comply with the regulations can be fined up to 6% of annual revenue.



Every aspect of our lives is  
evolving with digital  
innovation.

Are you ready?





# Advantage

Your domain expertise and experience.  
Start with the business challenge and goal.



# Needed

An ability to partner with AI experts and  
to use AI engines. Use AI to help you in  
your business goals.





Smartphones

Tablets

PCs

Cameras

Audio

Wearables

Games &amp; Apps

## TOP STORIES

PREMIUM

### Changing the face of tech one girl at a time

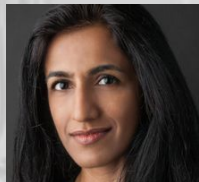
Volunteering at a kids' hackathon at a community centre here six years ago, Dr Ayesha Khanna was given a visceral reminder of a deep-seated bias when it comes to women and tech.





# THANK YOU

**DR. AYESHA KHANNA**



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**ADDO AI**  
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