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Blockchain Technology

Blockchain is a shared, immutable ledger that facilitates the process of recording transactions and tracking assets in a business network. An *asset* can be tangible (a house, car, cash, land) or intangible (intellectual property, patents, copyrights, branding). Virtually anything of value can be tracked and traded on a blockchain network, reducing risk and cutting costs for all involved.

IBM, 2020

Benefits of Blockchain Technology

GREATER TRUST:

- With blockchain, as a member of a members-only network, you can rest assured that you are **receiving accurate and timely data**, and that **your confidential blockchain records will be shared only with network members to whom you have specifically granted access**

GREATER SECURITY:

- **Consensus on data accuracy is required from all network members, and all validated transactions are immutable because they are recorded permanently.** No one, not even a system administrator, can delete a transaction.

MORE EFFICIENCIES:

- **With a distributed ledger that is shared among members of a network, time-wasting record reconciliations are eliminated.** And to speed transactions, a set of rules — called a smart contract — can be stored on the blockchain and executed automatically



Big Data



06

BIG DATA

Big data is data that contains greater **variety, arriving in increasing volumes and with more velocity**. This is also known as the three Vs. Put simply, big data is **larger, more complex data sets, especially from new data sources**. These data sets are so voluminous that traditional data processing software just can't manage them. But these massive volumes of data can be used to address business problems you wouldn't have been able to tackle before.



What is
Big Data?



<https://www.youtube.com/watch?v=bAyrObI7TY>

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BIG DATA

A National Institute of Standards and Technology report defined **big data** as **consisting of “extensive datasets—primarily in the characteristics of volume, velocity, and/or variability—that require a scalable architecture for efficient storage, manipulation, and analysis.”** Some have defined big data as an amount of data that exceeds a petabyte—one million gigabytes.





2.3

trillion gigabytes

Every day, we produce

2,500,000,000,000,000 bytes of data.

(IBM)

40

Zettabytes

(43 trillion gigabytes) of data will be created
by 2020, up 300% from 2015. (IBM)




6 42

hours minutes

is the average number of hours per day
users spend on the internet. (TNW)

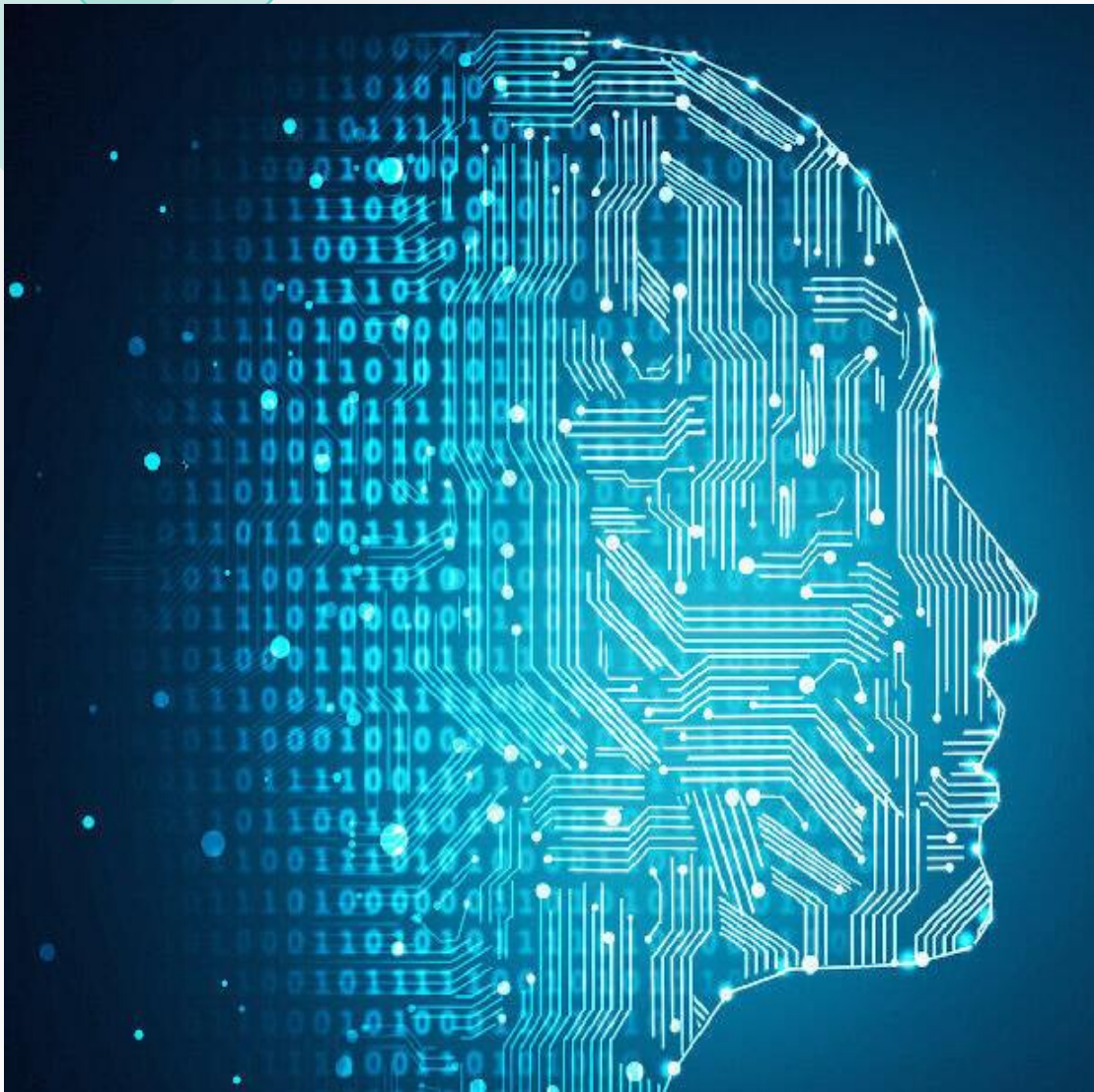
90%

of the total amount of all data ever
made on Earth was produced by
humans in the last two years alone.
(Forbes)



Artificial Intelligence





Hitechies, 2020

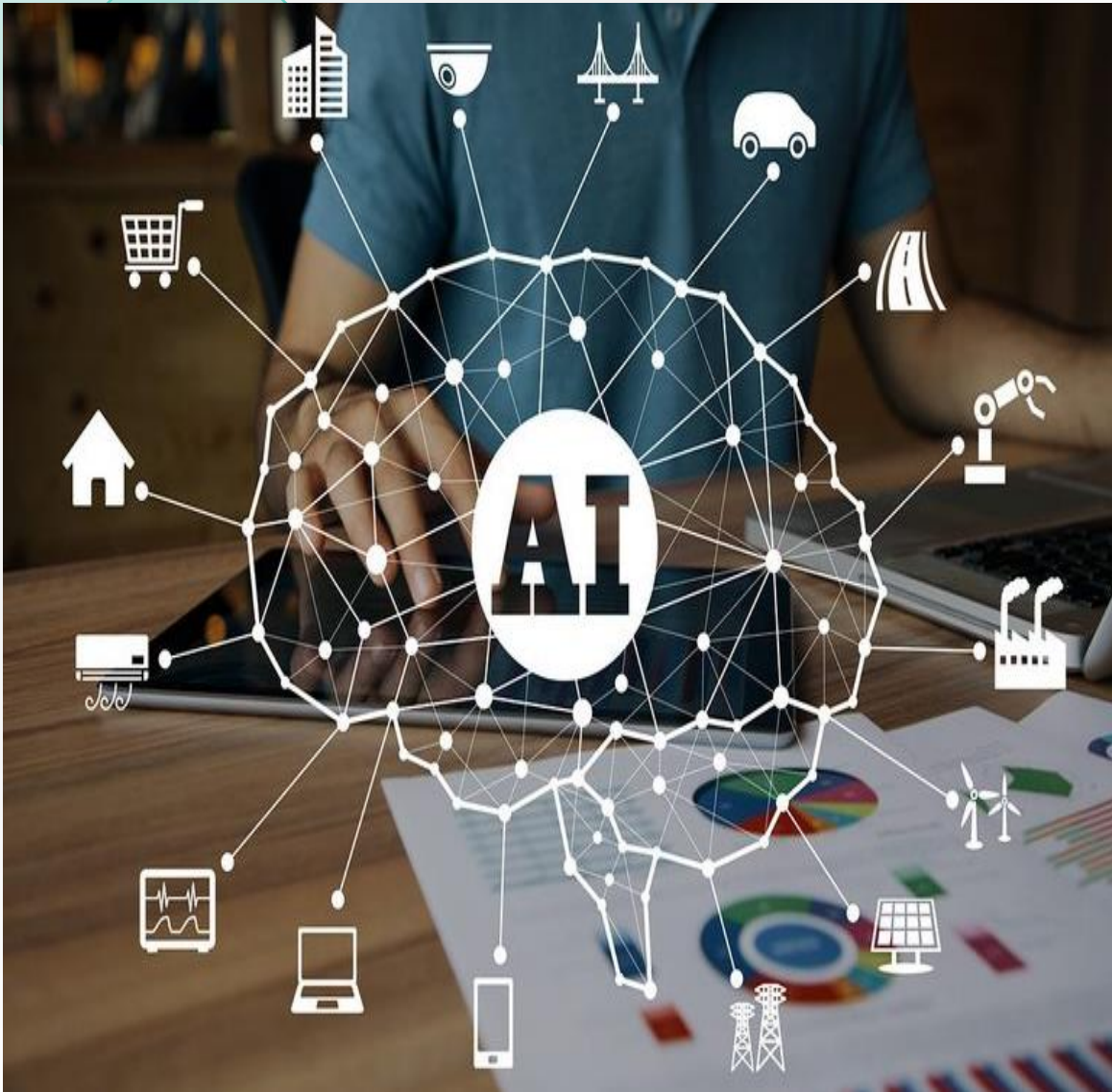
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Artificial Intelligence

is a term used to describe machines performing human-like cognitive activities such as learning, understanding, reasoning, and interacting.

Artificial intelligence can take many forms – it could be a computer program in technical infrastructure, a part of the production process or an end user product.

Today, smartphone smart assistants, such as Siri, perform a variety of tasks for users like provide maps and issue directions, improve security, and more.



Hitechies, 2020

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Economic Potential of AI

1. **A.I. is leading to a major increase in labor productivity.** Innovative technologies are enabling more efficient workforce-related time management processes to be implemented and followed.
2. **A.I. is creating a new virtual workforce** powered by 'Intelligent Automation' capable of solving problems and self-learning.
3. **The economy is benefiting from the diffusion of innovation,** which affects different sectors and creates new revenue streams.



Use Cases of Emerging Technologies for the Elderly



Use Cases : Use Case of VR & AR for the Ageing

Embodied Labs - Immersive Training Platform



Embodied labs Immersive Training offers simulations in which caregivers to take on the persona of an aging person facing a variety of situations, including macular degeneration, Alzheimer's and Parkinson's disease..

They get to experience what the Ageing patient are going through thereby creating empathy for the caregiver.



https://www.youtube.com/watch?v=Cia9kb_fdSw

Neuro Rehab



[Neuro Rehab VR](#) provides a virtual reality experience for older patients undergoing physical therapy following a stroke, brain injury or spinal cord injury or who suffer from neurodegenerative diseases.

By employing machine learning, the company tailors each exercise to a patient's specific therapy needs and ability.

https://www.youtube.com/watch?v=WmqWCG_-KM

Use Cases : Use Case of IoT Sensors for the Ageing

Toi Labs' True Loo : Smart toilet seat



The True Loo toilet seat has sensors that scan excreta in the toilet bowl. The information is then provided to the senior living managers so they can monitor their residents' health.

Toi Labs helps older adults track their health with innovative bathroom technology

Vital Tech's Vital band



VitalBand, the emergency voice call-out and fall-detection watch provides a more subtle way to monitor for falls, while tracking vital signs like heart and respiratory rate and oxygen saturation, as well as physical activity and sleep quality. It also provides medication reminders.

A cloud-based platform that improves patient health and wellness through connected care.



<https://www.youtube.com/watch?v=qxYteK4KS7M>

Use Cases : Use Case of AI for the Ageing

Intuition Robotics: ElliQ “a sidekick for happier aging.”



The proactive cognitive artificial intelligence product initiates conversation to help the senior stay in touch with family or loved ones, engage in healthy behaviors — including nudges to take medication — and stay connected with the outside world.

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<https://www.youtube.com/watch?v=1gQJ6zc11N4>

X-Lab's Personal AI Assistant



Wireless Networks enable the helmet to quickly upload the captured images to the cloud. Cloud AI then processes and identifies this images and then assists the life of the Visually impaired and the Ageing .

Use Cases : More Use Cases

GreatCall Responder



By pressing the button on the Responder, users are immediately connected to highly-trained certified response agents who will identify them and their location, conference in family or friends, dispatch 911 emergency services, access a nurse or provide any additional assistance, if needed.

BeClose



Using discreet wireless sensors placed in the home, BeClose tracks an elderly loved one's daily routine. Caregivers are able to check on them at any time using a private, secure web page. If there are any disruptions, remote caregivers will be alerted by phone, e-mail or text message.

Independa



Independa is a software company that provides supportive independence products and services to older adults and their caregivers who typically are remote some or all of the time. Independa augments traditional caregiving by providing fully integrated, cloud-based solutions including a caregiver web application, a rich set of telephony-based solutions, comprehensive solutions for social engagement and health



A world map where the landmasses are filled with a light blue hexagonal pattern. The map is centered on the Atlantic Ocean, showing North and South America on the left, Europe and Africa in the center, and Asia and Australia on the right.

Thank You

<https://enkiservices.com>