A futuristic white robot with a transparent visor and a glowing blue network of icons in the background. The robot is positioned on the left side of the frame, looking towards the right. The background is a dark blue gradient with a complex network of glowing blue lines and circular icons representing various technologies and industries, such as a globe, a laptop, a factory, a ship, and a person. The overall aesthetic is high-tech and futuristic.

What does the future behold for the nursing profession?

Keynote at NORNA- 6th congress, 8. sept 2023

Dr. Helga Sif Friðjónsdóttir, APMHN, RN



What has shaped my neuro pathways

- Born 1975
 - Microsoft established
 - IBM 5100 – first portable computer
- 1985
 - Mother – MS in computer science
 - Learned DOS commands
 - Watched a lot of Star trek
- 1997 – student at School of nursing
 - Teaching students to use email and web browsers
- 2002-2007 – Master and PhD in US
 - Irc, messenger, internet

The future of nursing: from the viewpoint of a newly graduate 2000

- Automation
- Artificial intelligence
- Virtual reality
- Communication via
techological/digital solutions
- The nurses themselves?
 - Cloning?





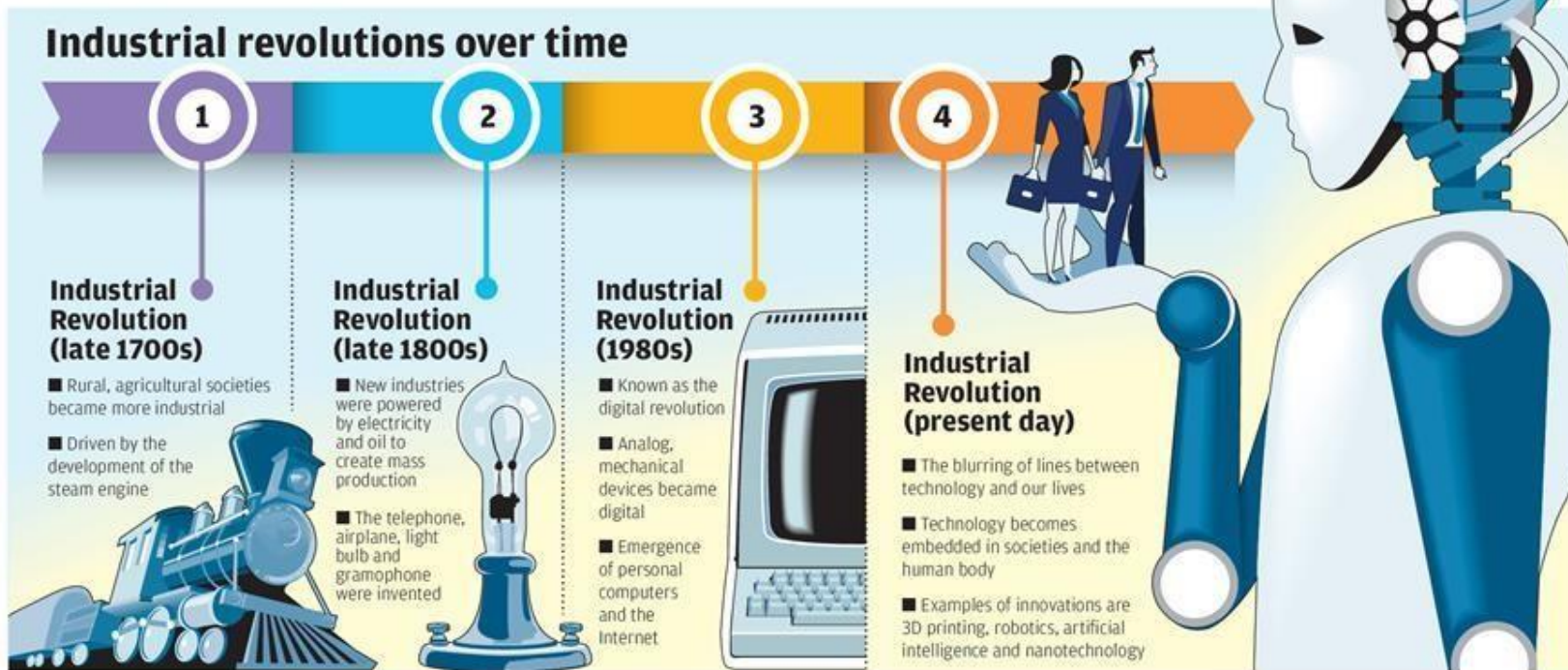
Article 2019

Influences of the 4th industrial revolution on nursing

Futurology

- Lifandi Vísindi – magazine with articles about development in different fields
- Google search
- UT messan – conference showcasing technological development in different fields
- Communications with people working in other fields than health care
- Science fiction and fiction books

The history



Factfile

History of industrial revolution

- 1.0** ◆ **1780 - Mechanisation**
Industrial production based on machines powered by water and steam
- 2.0** ◆ **1870 - Electrification**
Mass-production using assembly lines
- 3.0** ◆ **1970 - Automation**
Automation using electronics and computers
- 3.5** ◆ **1980 - Globalisation**
Offshoring of production to low-cost economies
- 4.0** ◆ **Today - Digitalisation**
Introduction of connected devices, data analytics and artificial intelligence technologies to automate processes further
- 5.0** ◆ **Future - Personalisation**
The fifth industrial revolution, or Industry 5.0, will be focused on the co-operation between man and machine, as human intelligence works in harmony with cognitive computing. By putting humans back into industrial production with collaborative robots, workers will be upskilled to provide value-added tasks in production, leading to mass customisation and personalisation for customers



The fourth industrial revolution

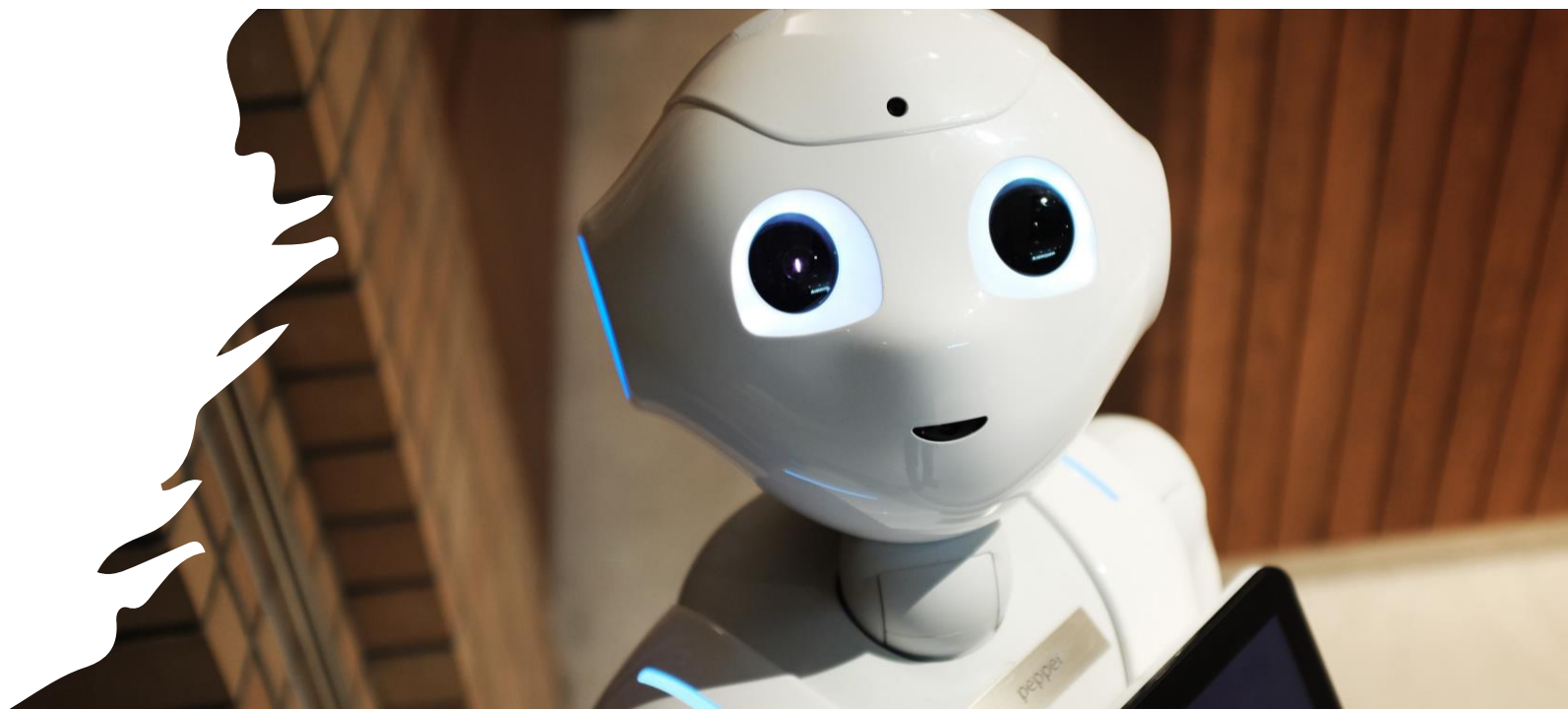
Characterized by the fusion of digital, physical and biological technologies

Innovative technologies

- Artificial intelligence
- Nano technology
- Robotics
- Quantum computers
- Bio-technology
- Internet of things
- 3D printing
- Big data and analysis



Pepper
humanoid robot

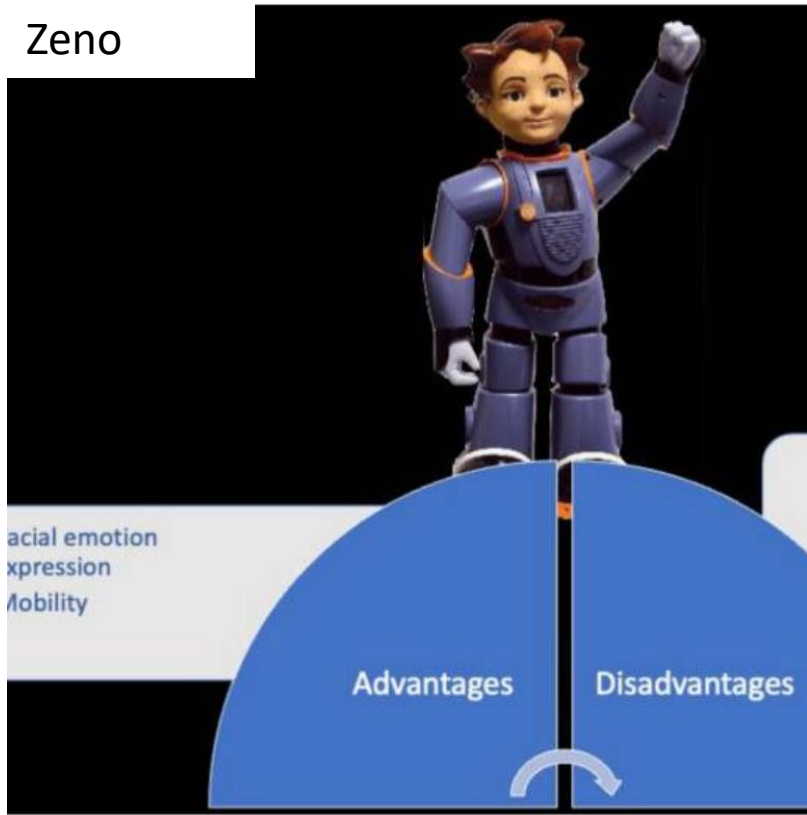


A little exercise

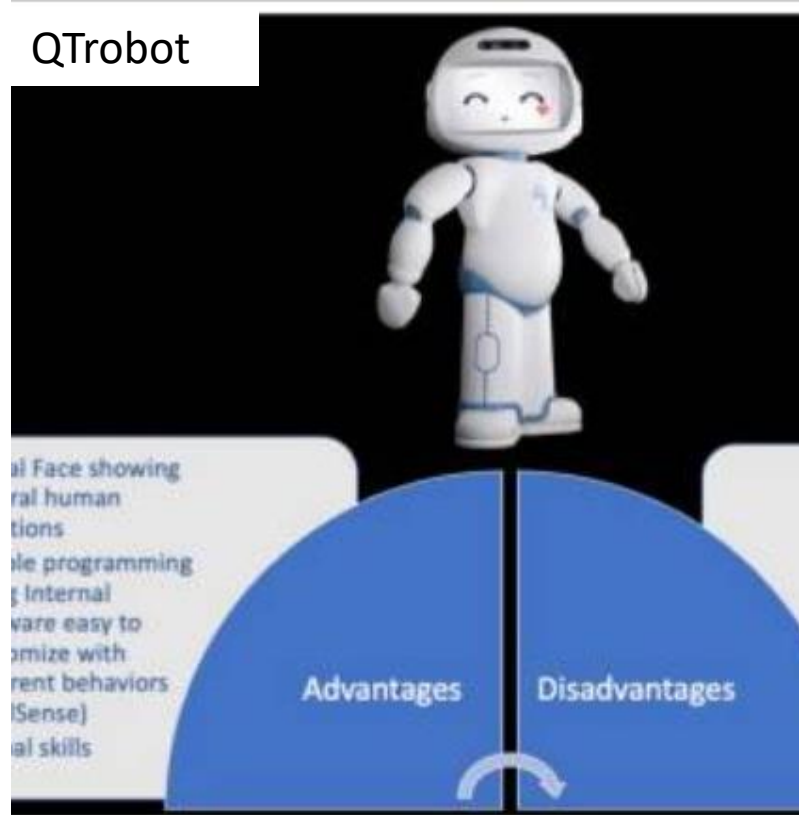
- Open the camera on your smart phone
- Scan the QR code
- Type in your answer



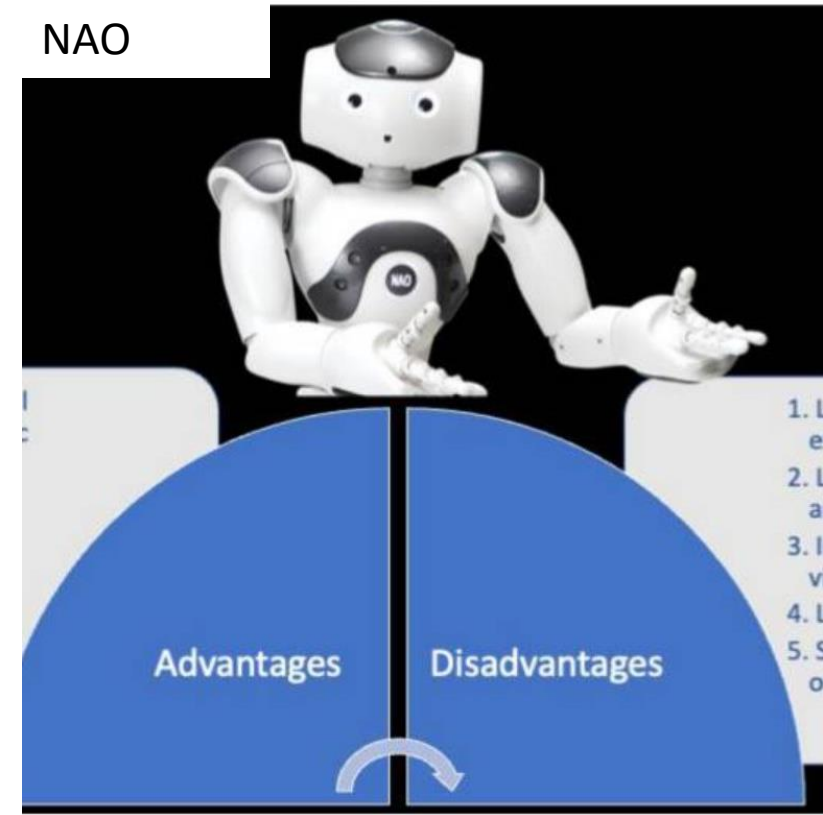
Zeno



QTrobot



NAO



Social Humanoid Robots for Children with Autism Spectrum Disorders

Another exercise – slido again



Please write examples of 4th industrial revolution developments in your profession in the last 3-4 year

Join at
slido.com
#1431 727

Are nurses
leading research
and innovation
projects?

Oh, hello
Rabbit Hole.

Not

You

again...

Let's ask the chatbot Chatgpt

- Who are the nurses that are researching or leading innovation projects in nursing?



Nurses play a vital role in healthcare innovation and research. Many nurses are actively involved in leading or contributing to innovation projects in nursing. However, it's important to note that the specific individuals involved in such projects can change over time, and my knowledge is up to date only until September 2021. Therefore, I cannot provide a comprehensive list of current nurses leading innovation projects.

To stay current on nurses leading innovation projects in nursing, I recommend checking recent publications, attending nursing conferences, and following relevant organizations and individuals on social media platforms. Additionally, you can reach out to nursing schools and healthcare institutions for information on ongoing innovation initiatives and research projects.

Mina and the Land of Dream

- Computer game for children age 4-8
- Purpose: to help them prepare for anaesthesia which they often fear and are anxious about.
- Available on Appstore and Google Play
- Available in Icelandic, English and Finnish




QUICKFIRE CHALLENGE SERIES

Johnson & Johnson Nurses Innovate QuickFire Challenge in Perioperative Care



FYI

The way we teach

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MATH: PRE-K - 8TH GRADE	MATH: HIGH SCHOOL & COLLEGE	SCIENCE	ARTS & HUMANITIES	READING & LANGUAGE ARTS
Pre-K through grade 2 (Khan Kids)	Algebra 1	Middle school biology - NEW	US history	Up to 2nd grade (Khan Kids)
Early math review	Geometry	Middle school Earth and space science - NEW	AP®/College US History	2nd grade
2nd grade	Algebra 2	Middle school physics - NEW	US government and civics	3rd grade
3rd grade	Integrated math 1	High school biology	AP®/College US Government & Politics	4th grade
4th grade	Integrated math 2	High school biology - NGSS	World History Project - Origins to the Present	5th grade
5th grade	Integrated math 3	High school physics	World History Project - 1750 to the Present	6th grade
6th grade	Algebra basics	High school physics - NGSS	AP®/College World History NEW	7th grade
7th grade	Trigonometry	AP®/College Biology	Big History Project	8th grade
8th grade	Precalculus	AP®/College Chemistry	Art history	9th grade
See Pre-K - 8th Math	High school statistics	AP®/College Environmental Science	AP®/College Art History	Grammar
	Statistics & probability	AP®/College Physics 1	See all Arts & Humanities	See all Reading & Language Arts
MATH: GET READY COURSES	College algebra NEW	Health and Medicine	ECONOMICS	LIFE SKILLS
Get ready for 3rd grade	AP®/College Calculus AB	See all Science	Macroeconomics	AI for education NEW
Get ready for 4th grade	AP®/College Calculus BC	COMPUTING	AP®/College Macroeconomics	Social & emotional learning (Khan Kids)
Get ready for 5th grade	AP®/College Statistics			Internet safety NEW
Get ready for 6th grade	Multivariable calculus			Financial literacy NEW
Get ready for 7th grade	Differential equations			
Get ready for 8th grade	Linear algebra			



Characteristics and competence of health care staff for the future

- Emotional intelligence
- Competence in communication
- Creative and critical thinking
- Leadership abilities
- Innovative abilities

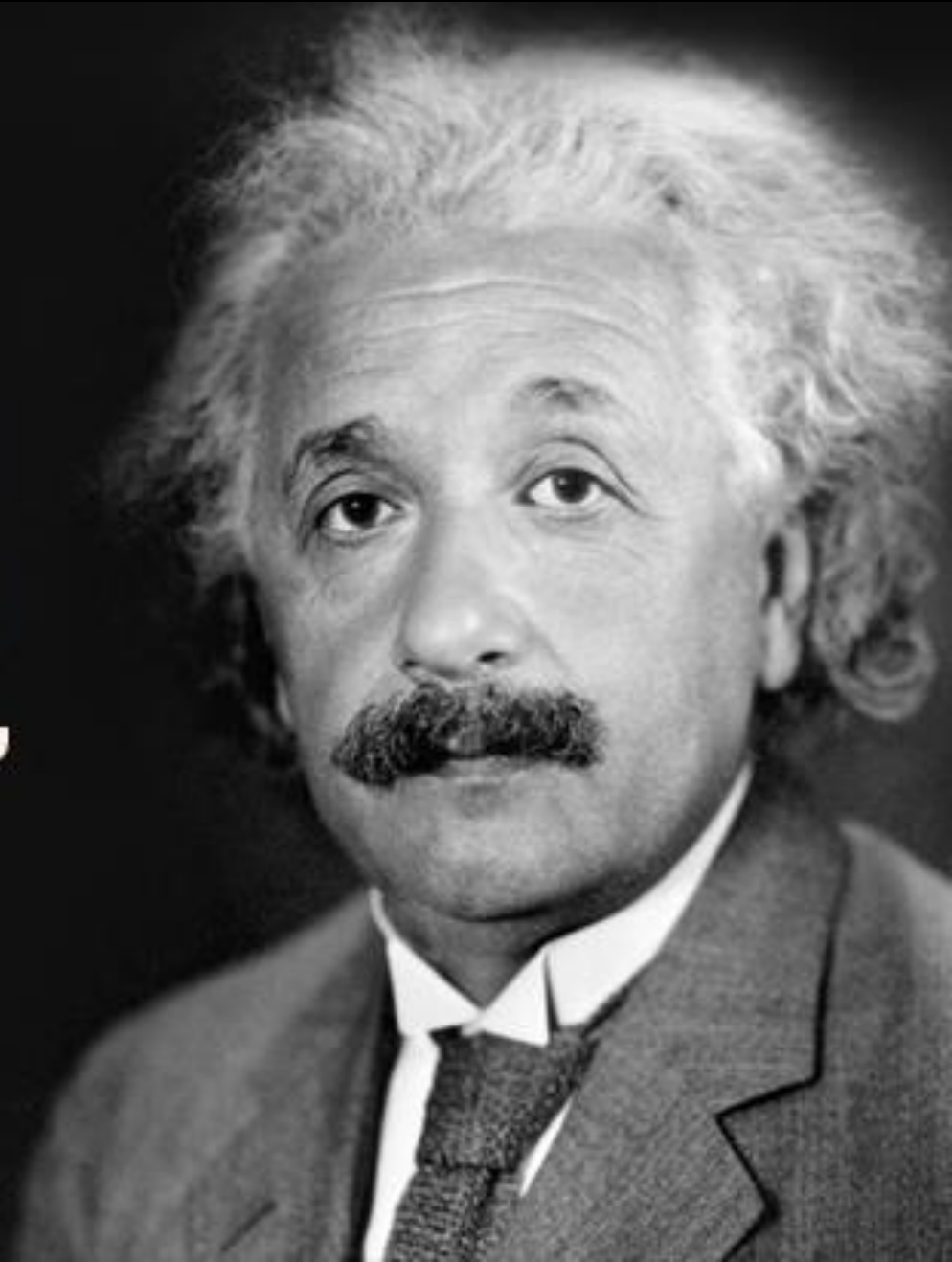
A graphic featuring the word "ATTENTION!" in bold, yellow, sans-serif capital letters with a black outline. The text is set against a red, jagged-edged speech bubble background. The entire graphic is centered within a white circle that is part of a larger, multi-layered circular design in shades of light blue and green.

- Ethical implications
- Legal implications
- Data privacy
- Data security
- Security
- Technology-induced disparities in health care access



**“Logic will get you from
A to B. Imagination will
take you everywhere.”**

~ Albert Einstein





Exponential growth

1, 2, 4, 8, 16, 32, 64, 128, 256, 512, 1024, ...



Humans predicting the future often extend the current situation in linear fashion

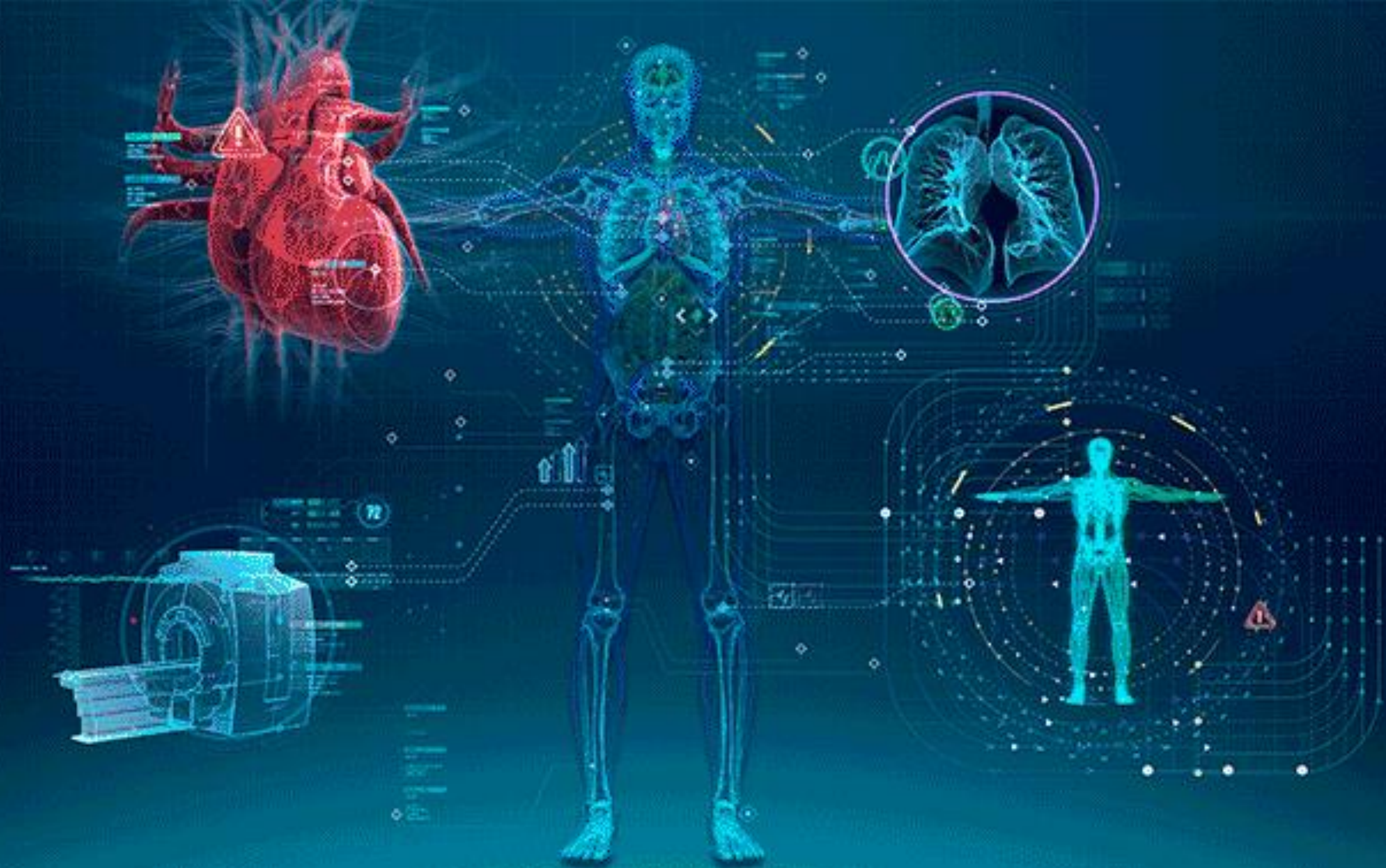
We might not have enough imagination to foresee the exponential growth of technology and its effects of the future

- Let us use our imagination for a few minutes





A future hospital room?





Helping a peer nurse fasten a screw?



Look for the trends

Final excersice

- By yourself, imagine what nursing in the OR will look like in the future (2 min)
- Turn to your neighbor and tell him what you imagine (take turns)

Loosing connection to reality

- Relax our body and breath



Confession

- write a 250 word abstract on the implications of the fourth industrial revolution for the future of the nursing profession



Abstract:

The Fourth Industrial Revolution, characterized by the fusion of digital, physical, and biological technologies, is reshaping numerous industries and societies around the world. In the healthcare sector, this revolution is poised to have profound implications for the nursing profession. This abstract explores the potential impact of the Fourth Industrial Revolution on the future of nursing, considering the integration of advanced technologies, data-driven healthcare, and evolving roles and skills.

The Fourth Industrial Revolution brings with it a range of innovative technologies, such as artificial intelligence (AI), robotics, and the Internet of Things (IoT). These technologies have the potential to automate certain tasks, augment the abilities of nurses, and enhance patient care. AI algorithms can analyze vast amounts of medical data, leading to improved diagnosis, treatment, and patient monitoring. Robotics can assist with routine tasks, enabling nurses to focus on complex patient care. The IoT can facilitate the seamless exchange of information between healthcare devices and systems, enhancing coordination and efficiency.