



Symposium on
Opportunities and Challenges of Artificial Intelligence in Digital Health

The Iranian Academy of Medical Sciences
(Digital Health Working Group)

In Collaboration with



The Advanced ICT Research Institute &
Data Science and Artificial Intelligence Innovation Center
Sharif University of Technology

<https://ams2024.events.sharif.edu/>

Tehran, Iran
January 31st – February 1st, 2024

The Iranian Academy of Medical Sciences
(The Digital Health Working Group)

Symposium on

**Opportunities and Challenges of
Artificial Intelligence in Digital Health**



<https://ams2024.events.sharif.edu/>

Prof. Rabiee Auditorium, Sharif University of Technology
Tehran, Iran
January 31st – February 1st, 2024

Symposium of Academy of Medical Sciences: Digital Health Department

Opportunities and Challenges of Artificial Intelligence in Digital Health

Artificial intelligence (AI) has created an unprecedented revolution in various fields of medicine and digital health. It continuously improves multiple services in disease prevention, diagnosis, prediction, and treatment. It will shape the future of individual and global public health and help countries improve global health.

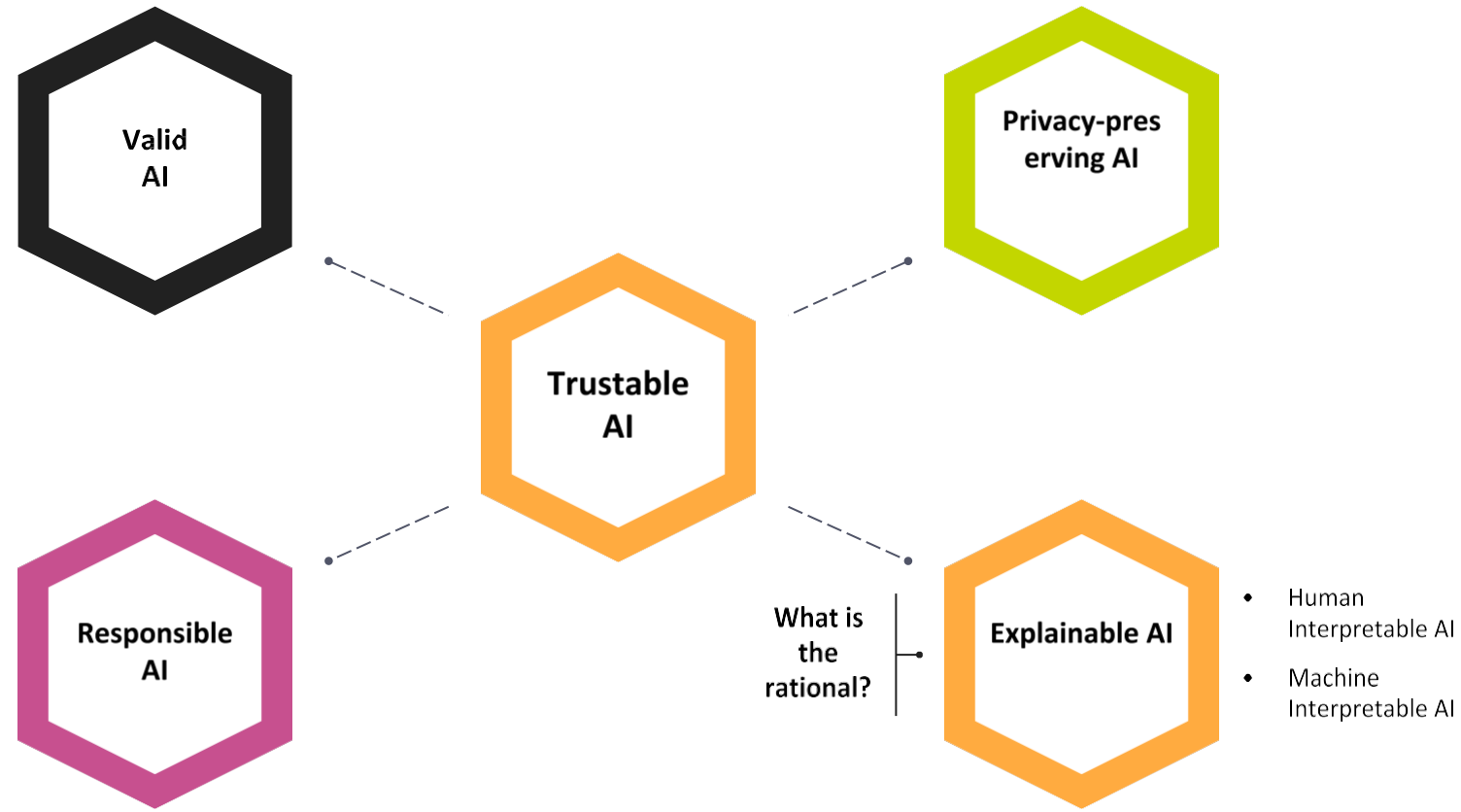
Despite all these advantages, the risks and challenges of artificial intelligence in the health field must be considered alongside its potential benefits. Ethical, legal, and social issues related to access to appropriate data, privacy, interpretability and reliability, and human-centeredness of artificial intelligence systems are some of the important challenges in this field that are developing rapidly.

The World Health Organization (WHO) guidance on Ethics & Governance of Artificial Intelligence for Health also calls for caution to be exercised in using artificial intelligence (AI) and large language model tools (LLMs) to protect and promote human well-being, human safety, and autonomy, and preserve public health.

In this symposium, scientists and experts in medicine and engineering from around the globe will address some of these opportunities and challenges through oral presentations, debate sessions, roundtables and workshops.

Opportunities and Challenges of Artificial Intelligence in Digital Health

The need to use Trustworthy AI in digital health



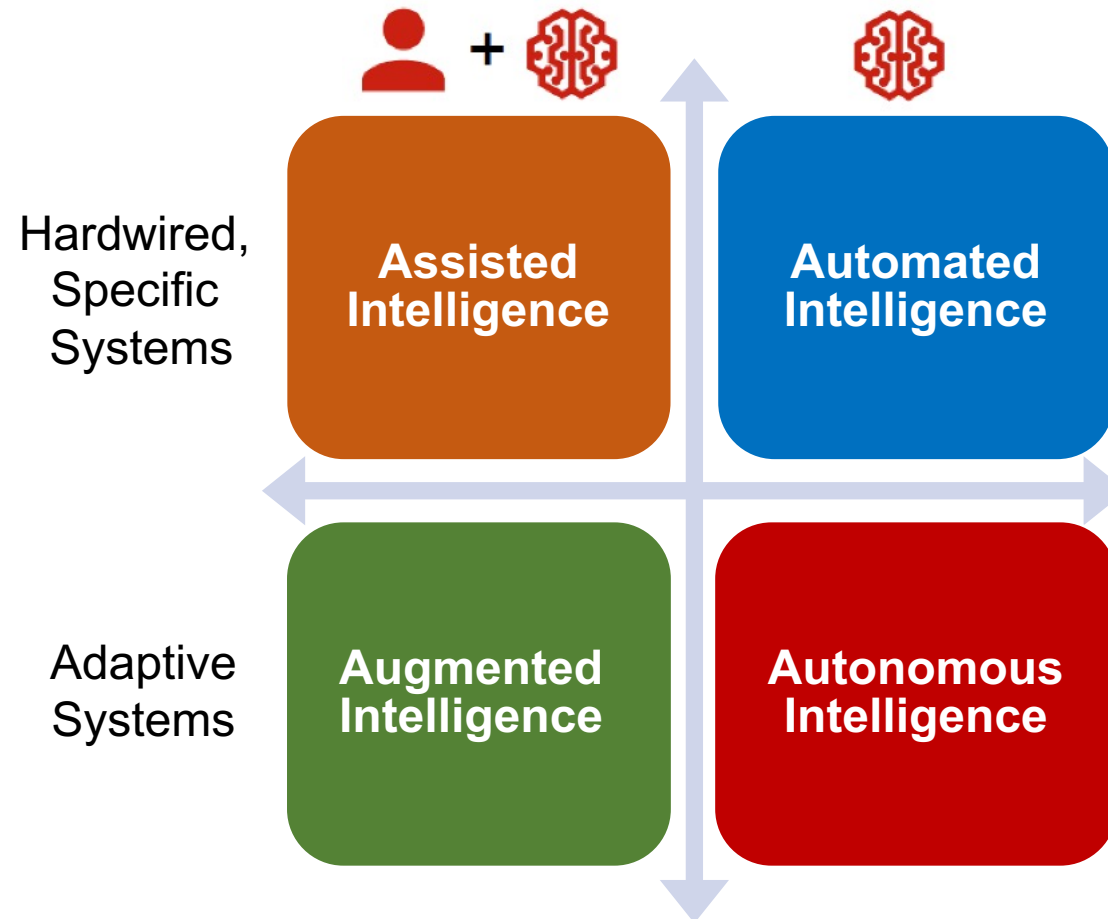
Opportunities and Challenges of Artificial Intelligence in Digital Health

The need to solve big data challenges in digital health



Opportunities and Challenges of Artificial Intelligence in Digital Health

The need to use human-centered AI in digital health
In order to ensure trustworthy and ethical AI



Symposium of Academy of Medical Sciences: Digital Health Department

Opportunities and Challenges of Artificial Intelligence in Digital Health

Symposium Type:

In person - (online only for participants from abroad and cities other than Tehran)

Symposium Language:

Farsi (English for international speakers)

Symposium Publications:

Edited booklet of the lectures and topics raised in the symposium, including supplementary materials

Symposium Workshops:

Workshop 1: Tutorial on AI tools for Digital Health

Workshop 2: Basic Skills for Generative AI in Medicine

Workshop 3: Tutorial on Large Language Models (LLMs) for Digital Health

Symposium Location & date:

Wednesday and Thursday: January 31st , February 1st , 2024

Prof. Rabiee Auditorium, Sharif University of Technology, Tehran, Iran

Symposium of Academy of Medical Sciences: Digital Health Department

Opportunities and Challenges of Artificial Intelligence in Digital Health

Symposium Location & date:

Prof. Rabiee Auditorium

Sharif University of Technology, Tehran, Iran

Capacity: 310



Symposium of Academy of Medical Sciences: Digital Health Department

Opportunities and Challenges of Artificial Intelligence in Digital Health

President:
Hamid R. Rabiee

Scientific Committee Chair:
Mansoor Fatehi

Scientific Committee (Alphabetically ordered)

- Saeed Akhlaghpour (Australia)
- Hamid Alinejad-Rokni (Australia)
- Kambiz Bahaoddini
- Hamid Beigy
- Amin Beheshti (Australia)
- Ehsan Bitaraf
- Seyed Hassan Emami Razavi
- Farzad Fatehi
- Farhad Fatehi (Australia)
- Mansoor Fatehi
- Emad Fatemizadeh
- Hossein Ghadiri Heravi
- Masoumeh Gity
- Reza Golpira
- Hamed Haddadi (UK)
- Mandana Hassanzad
- Babak Hossein Khalaj
- Mahdi Mahmoudi
- Reza Malekzadeh
- Mohammad Mofrad (USA)
- Hamid R. Rabiee
- Reza Rabiei
- Hossein Riazi
- Mohammad Hossein Rohban
- Mahnaz Samadbeig
- Naser Shakerhosseini
- Hamid Soltanianzadeh
- Amirhossein Takian
- Seyed Mahmood Tara
- Shahram Tofighi

Symposium of Academy of Medical Sciences: Digital Health Department

Opportunities and Challenges of Artificial Intelligence in Digital Health

Reception – Welcome Talk: 8:00 – 8:30

Session Chairs: Ali Jafarian, Mansoor Fatehi

Morning Meeting 1 Wednesday: January 31, 2024	8:30 – 8:50	Ahmad R. Sharafat	Governance Framework of AI in Health	Workshop 1 Tutorial on LLMs for Digital Health
	8:50 – 9:10	Mansoor Fatehi	Structured Medical Documentation & Artificial Intelligence	
	9:10 – 9:15	Video Clip		
	9:15 – 10:00	Debate: Challenges of Collaboration in AI Projects Mansoor Fatehi (Moderator), Reza A. Zoroofi, Alireza Shakibafard		
	10:00 – 10:30	Refreshments (Visiting The Exhibition of AI Products)		

Symposium of Academy of Medical Sciences: Digital Health Department

Opportunities and Challenges of Artificial Intelligence in Digital Health

Session Chairs: Fattaneh Taghiyareh, Mahmood Tara

Morning Meeting 2 Wednesday: January 31, 2024	10:30 –10:50	Hamid R. Rabiee	Trustworthy AI and Digital Health	Workshop 1 Tutorial on LLMs for Digital Health
	10:50 –11:10	Mahmood Tara	Transparent Intelligence in Clinical Practice	
	11:10 –11:15	Video Clip		
	11:15 –12:15	Debate: Is Black-Box AI Acceptable for Medical Diagnosis? Mahmood Tara (Moderator), Babak Najjar Arabi, Amirhossein Takian		
	12:15 –13:30	Lunch & Prayer (Visiting The Exhibition of AI Products)		

Symposium of Academy of Medical Sciences: Digital Health Department

Opportunities and Challenges of Artificial Intelligence in Digital Health

Session Chairs: Seyed Hassan Emami Razavi, Emad Fatemizadeh

Evening Meeting
Wednesday: January 31, 2024

13:30 –13:50

Emanuele
Neri

Challenges of Data Storage, Processing and
Usage in Digital Health

13:50 –14:10

Henning Muller

Multinational Image Repositories: “Big Picture &
The Cancer Image Archive” Projects

14:10 –14:30

Mohammad
Hossein Rohban

Recent Advances in Intelligent Analysis of
Histopathological Images

14:30 –14:45

AI Products
Demo

Short Presentations of AI Products in Digital
Health

14:45 –15:45

Roundtable Meeting – Computational Challenges of Utilizing AI in Medical Applications
Emad Fatemizadeh (Moderator): Hossein Ghadiri, Hamid Alinejad-Rokni, Ehsan Bitaraf,
Amirreza Radmard

15:45 –16:00

Refreshments (Visiting The Exhibition of AI Products)

Workshop 2
Basic Skills for Generative AI in Medicine

Symposium of Academy of Medical Sciences: Digital Health Department

Opportunities and Challenges of Artificial Intelligence in Digital Health

Session Chairs: Babak Hossein Khalaj, Mohammad R. Maboodian

Morning Meeting 1 Thursday: February 1, 2024	8:30 – 8:50	Mohammad R. Maboodian	Challenges of Quantitative and Qualitative limitations of Data in Digital Smart Health	Workshop 3 Tutorial on AI Tools for Digital Health
	8:50 – 9:10	Woojin Kim	Opportunities and Challenges of Using Large Language Models (LLMs) in Digital Health	
	9:10 – 9:15	Video Clip		
	9:15 – 10:00	Debate: Challenges in Health Data Mohammad R. Maboodian (Moderator), Babak Hossein Khalaj, Reza Golpira, Saeed Akhlaghpour		
	10:00 – 10:30	Refreshments (Visiting The Exhibition of AI Products)		

Symposium of Academy of Medical Sciences: Digital Health Department

Opportunities and Challenges of Artificial Intelligence in Digital Health

Session Chairs: Hamid Beigy , Hamid R. Rabiee

Morning Meeting 2 Thursday: February 1, 2024	10:30 –10:50	Gholamali Hosseinzadeh	Opportunities and Challenges of Using Virtual Reality and Augmented Reality in Brain Digital Health
	10:50 - 11:10	Farhad Fatehi	Informed Consent for Health Data Utilization in AI Model Training
	11:10 - 11:15	Video Clip	
	11:15 - 12:15	Debate – Generative AI and Health Applications Hamid R. Rabiee (Moderator), Hamid Beigy, Amin Beheshti, Reza Rabiei	
	12:15 –13:30	Lunch & Prayer (Visiting The Exhibition of AI Products)	
			Workshop 3 Tutorial on AI Tools for Digital Health

Symposium of Academy of Medical Sciences: Digital Health Department

Opportunities and Challenges of Artificial Intelligence in Digital Health

Session Chairs: Reza Malekzadeh, Shahram Tofighi

Evening Meeting Thursday: February 1, 2024	13:30 –13:50	Luis Marti-Bonmati	Opportunities and Challenges of Precision and Personalized Medicine in Smart Digital Health
	13:50 –14:10	Karim Abbasi	Opportunities and Challenges of AI in Drug Design
	14:10 –14:40	AI Products Demo	Short Presentations of AI Products in Digital Health
	14:40 –15:45	Roundtable Meeting – The Future of AI in Medicine Shahram Tofighi (Moderator): Reza Malekzadeh, Amirhossein Takian, Amin Beheshti, Mahmood Tara, Mansoor Fatehi, Hamid R. Rabiee	
	15:45 –16:00	Closing Ceremony: Appreciations and Awards	
	16:00 –16:30	Refreshments (Visiting The Exhibition of AI Products)	