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The ethical issues in the use of AI in healthcare

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1 INTRODUCTION

In the 21st century, advancements in theory and computational power have rapidly propelled artificial intelligence (AI), especially in healthcare, drawing significant investments (see Figures 1.1 and 1.2). Proponents believe AI can enhance diagnostic accuracy, extend care to remote areas, and save doctors' time for more patient interaction [1]. However, AI also brings with a colossally abundant number of ethical problem in healthcare area. This text will explore these issues' in Privacy and data protection, Transparency and Trust, Machines and humans collaborate angle and give some suggestings.

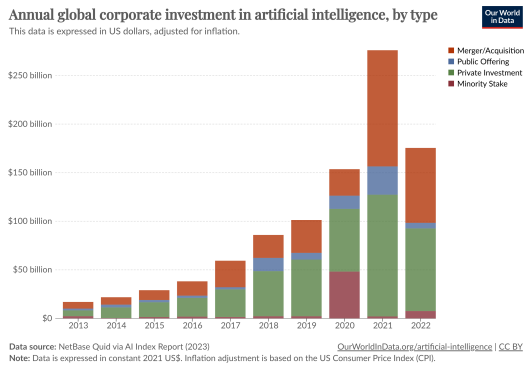

Figure 1.1: Annual investment in AI by type

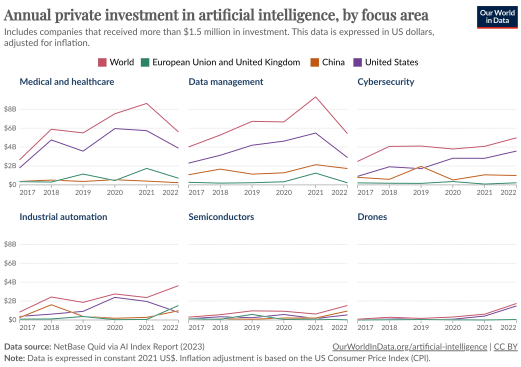

Figure 1.2: Annual investment in AI by area

2 Privacy and Data Protection

In the realm of Healthcare AI, the protection of patient privacy and data is paramount. Patients express concerns about the use of their sensitive information, such as medical records and test results, which are stored in hospital databases. They question the duration of data storage, access by staff, purposes of data use, and potential for unauthorized sharing [2]. Although electronic records offer increased security compared to paper files, there remains a risk of cyberattacks and internal visibility. The implications of data breaches are profound, affecting personal life through potential bullying, increased insurance costs, and job loss due to disclosed medical history [3]. Therefore, ensuring robust data protection measures and transparency in data handling is essential for maintaining trust in healthcare services.

3 Transparency and Trust

The pervasive "black box" nature of AI algorithms fuels transparency and trust issues in Healthcare AI (HCAI). The public's apprehension is amplified by concerns over HCAI's recommendations for diagnosing and treating medical conditions, despite physician oversight [4]. This skepticism is particularly strong among older individuals and those with lower economic status, who fear AI may bring more harm than good. The lack of direct experience with HCAI and a basic understanding of AI contribute to a global sentiment of unease about AI's societal impact in the coming decades.

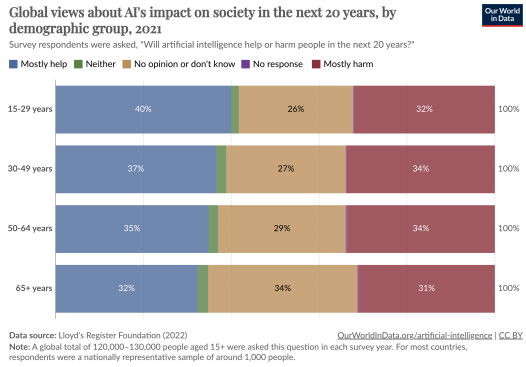

Figure 3.1: Views on AI's impact on society by ages

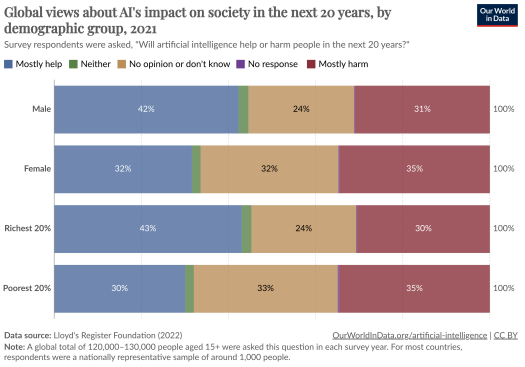

Figure 3.2: Views on AI's impact on society by gender and wealth

4 Machines and Humans Collaborate

Artificial intelligence is heralded as a breakthrough for complex medical tasks, such as accurately interpreting chest X-rays, potentially outperforming humans. However, this innovation stirs fear among doctors about being replaced or marginalized, highlighting a lack of trust in AI and its developers, which could hamper AI's development in healthcare.

In Additionally, a national survey in Turkey, involving 167 emergency medicine specialists, 61.68% trust in anonymity to protect privacy, and 70.66% believe AI systems are unbiased [5], This result indicated a majority downplay ethical concerns about data storage and reuse.
Further more, the people are not just composed of data, not matter docter or a public they all personhood. Machines have no personhood and will only give cold conclusions. Medical staff need to maintain professionalism and compassion during diagnosis and treatment. If these are lost, it is possible to intensify the mechanization and dehumanization of patients, and the unique situation of the patient will be Without being heard.

5 SUGGESTINGS

(1) By educating the public and medical staff on artificial intelligence and related ethical issues, this will help to improve their awareness of privacy and human rights in artificial intelligence.
(2) By openly acknowledging the value of medical staff and respecting the decisions of clinicians, they realize that artificial intelligence is not a competitive relationship but a cooperative relationship, and the output of artificial intelligence is communicated to patients in a way that doctors can understand.
(3) Implement stringent oversight mechanisms and regulations to ensure HCAI systems are used under the guidance of experienced physicians, safeguarding against misdiagnosis or inappropriate treatment suggestions.
(4) Based on PCC and EBM care approaches, involve patients in the development and evaluation of HCAI systems to ensure that these technologies meet their needs and address their concerns, particularly regarding the mechanization and dehumanization of care [6].

6 CONCLUSION

Human fear comes from the unknown, Puclic's anxiety towards HCAI in healthcare stems from a lack of understanding. Medical staff's anxiety come from the disruption of traditional work models by HCAI. The confusion and panic caused in this situation are the fundamental reasons for the moral and ethical problems of artificial intelligence.
Breaking the unknown path is to spread knowledge. When people reveal the mystery of artificial intelligence, the fear hidden in their hearts will be banished. The path to expel chaos lies in establishing order. When we integrate clear norms and guidance into medical practice, confusion about the future can find direction.
The birth of new things is based on the destruction of existing things. The destruction of the traditional medical system by artificial intelligence is an inevitable result of its development. Human panic is also a normal emotional expression. Only by facing it squarely can we solve it.

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