

The ethical issues in the use of AI in healthcare

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March 2, 2024

1 INTRODUCTION

Based on the improvement of certain theories and the improvement of computer computing power, AI has achieved rapid development in the 21st century. It raises huge expectations, has attracted significant investment especially in Medical and healthcare area (figure1.1). So far, advocates of healthcare AI (HCAI) have promised the technology will improve the accuracy of screening and diagnosis, increase the availability of care in remote regions and free up physician's time so that they can engage more with patients [1]. Meanwhile, questions around the potential exacerbation of health disparities due to modeling biases have raised notable ethical concerns regarding the use of this technology in healthcare [2]. Including concerns about privacy and data ownership, the risk of harm through biased systems and a lack of human oversight [3]. Here we are going to discuss, how did this issues arise and what should we do to solve it.

2 SECTION1

Public may be both beneficiaries of new HCAI technologies and the greatest sufferers of AI-related harms. The result highlight that there are still noticeable concerns about implementing HCAI in diagnostics and treatment recommendations for patients with both acute and chronic illnesses, even if these tools are used as a recommendation system under the physician experience and wisdom. Individuals may still not be ready to accept and use HCAI [4]. In general terms it refers to questions involving moral concepts such as right and wrong, or good and bad. In most familiar contexts humans intuitively know what is right and wrong, a knowledge of ethics that is acquired during human socialisation. Sometimes this intuition

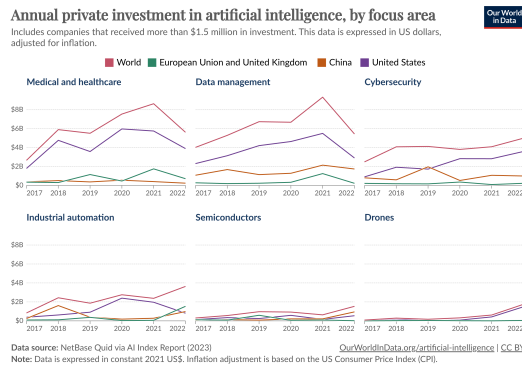


Figure 1.1: Annual private investment in AI

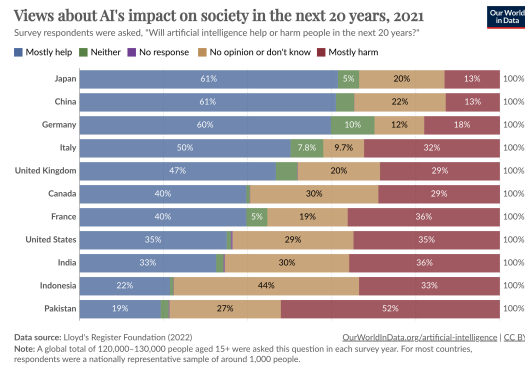


Figure 1.2: Views on AI's impact on society

fails or conflicts with others' intuitions, at which point ethics appears as a set of explicit statements in the form of "you should never / always do X". Where such statements are not accepted and need justification, ethics as a set of philosophical theories is called for. Ethics can be descriptive or normative, abstract or applied.

AI and advanced digital technologies are set to transform healthcare and healthcare systems in a significant way in the twenty-first century

REFERENCES

- [1] Emma Kellie Frost, Rebecca Bosward, Yves Saint James Aquino, Annette Braunack-Mayer, and Stacy M. Carter. Public views on ethical issues in healthcare artificial intelligence: Protocol for a scoping review. *Systematic Reviews*, 11(1):142, December 2022.
- [2] David Oniani, Jordan Hilsman, Yifan Peng, Ronald K. Poropatich, Jeremy C. Pamplin, Gary L. Legault, and Yanshan Wang. Adopting and expanding ethical principles for generative artificial intelligence from military to healthcare. *npj Digital Medicine*, 6(1):225, December 2023.
- [3] Amelia Katirai. The ethics of advancing artificial intelligence in healthcare: Analyzing ethical considerations for Japan's innovative AI hospital system. *Frontiers in Public Health*, 11:1142062, July 2023.
- [4] Pouyan Esmailzadeh, Tala Mirzaei, and Spurthy Dharanikota. Patients' Perceptions Toward Human-Artificial Intelligence Interaction in Health Care: Experimental Study. *Journal of Medical Internet Research*, 23(11):e25856, November 2021.