Assignment

Ethical Assessment Model

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Course

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Introduction

Ethical analysis is an important aspect of the dynamic network of professional spaces that helps to define morality and preserve integrity. The critical approach guarantees conformity with ethics/laws, thus building on trust and reliability in professional relationships. The selected case study revolves around an issue in the artificial intelligence (AI) development area, specifically ethics and its role in informing decisions made using AI within the healthcare sector. The topic discussed has great significance to me, both professionally and personally, as it deals with the possible future application of the healthcare industry with the use of modern technologies for making decisions in the future. This case raises an ethical dilemma concerning the tradeoff between the efficiency and accuracy that come with AI and dehumanized oversights and biased AI algorithms.

Ethical Situation

A new AI system has been introduced in a regional hospital that will help diagnose cardiovascular issues. The AI recommends both diagnosis and treatment based on patient data and medical images. However, this soon reveals that the AI is inappropriate for diagnosing women who display unusual signs, resulting in delayed or inaccurate treatment. The contrast calls for urgent ethical concerns about some form of gender bias in the training that had a majority of medical studies that tended toward a male-only perspective. However, it is alarming to highlight how a misdiagnosed patient can experience adverse effects as his life might be at stake, bringing up the question of whether the AI system is reliable and what are the ethics involved in such sensitive choices.

This case illustrates an urgent matter concerning ethics in using AI as medical diagnosis, specifically for cardiovascular diseases. Lack of diversity in the AI's training data can contribute significantly towards gender bias; this may result in misdiagnosis of women, thus compromising patient safety and treatment results. The resultant scenario creates crucial ethics inquiries on the inclusion as well as the fairness of AI algorithms in healthcare, particularly in critical illnesses. Also, such a case study should be concerned with the stages of building the AI as well as the selection made in its training data and the heterogeneity of medical cases. The researchers must also consider whether or not the AI's process for making decisions accounts for the differences in symptoms that develop between genders. It becomes crucial to make sure that there is fair medical care with the moral competence and diversity of AI training in hospitals.

Background

The stakeholders who have varied views and interests include different persons and institutions as far as considering the ethics involved when integrating AI in health care diagnosis.

Patients: To achieve a high level of accuracy and reliability, patients, as principal consumers of health care, deserve accurate diagnoses. There is increasing demand for effective and safe therapies and an increased concern for treatment individuality and transparency. There are concerns with AI that include questions about the impersonality of diagnosis as well as mistakes made by algorithms. More studies are required to know how patients perceive and experience AI-driven healthcare regarding trust and satisfaction rates.

Healthcare Professionals: The adoption of AI affects doctors, nurses, and other healthcare providers at a personal level. However, some believe that AI will lead to the degradation of clinical skills and may even overturn or outweigh healthcare providers' clinical judgments. It is important to consider the balance between human decision-making and AI support in the medicinal arena. Moreover, more specific data about how healthcare workers interrelate with AI technology in the 'real world' will be useful.

Healthcare Organization Administrators: The focus of these stakeholders lies in ensuring high-quality healthcare services at low costs and maintaining a good reputation for their services. AI is meant to optimize operations as well as increase patient throughput. The problem is they are confronted with ethical issues and must uphold the trust of patients and workers. In essence, it goes beyond looking at the economic and administrative effects involved in integrating AI into health care to understand their perspective.

AI Developers and Ethicists: They are mandated to create ethics guidelines for the implementation of artificial intelligence operations. The developers want to develop efficient and accurate AI instruments, while ethicists look at the moral aspects of such technologies as well as their societal influence. More research is required to explain what measures these groups put in place to counter concerns relating to algorithmic transparency, bias, and AI autonomy balance versus human oversight.

Ethical Assessment

Ethical evaluation of AI's integration into healthcare diagnostics is complex, comprising administrative, strategic, and interpersonal facets. The administrative focus is on AI's legal regulations and standards. Patient safety laws like HIPAA and even medical malpractices are directly related. Furthermore, ethics codes supplied by medical boards and professional bodies are essential in outlining the proper utilization of AI (Armitage, 2023). Such codes focus on important issues in healthcare ethics, such as non-maleficence, patient autonomy, and informed consent. The dilemma, however, is that these laws and codes are constantly changing, and they may never catch up with contemporary technology. Therefore, regular revisions must be conducted to ensure those regulations cater to AI issues, like algorithmic fairness and accountability.

Evaluating the strategic implications of AI in healthcare diagnostics involves using a utilitarian approach.

The objective is to maximize benefits like increased precision and effectiveness of prognosis, with minimal side effects such as algorithm bias resulting in wrong diagnosis. The transition of the clinical decision-making process to artificial intelligence systems can be ethically justified in cases where AI systems result in better results than human beings for certain tasks, such as melanoma diagnosis and CT reading. Thus the strategic analysis entails an assessment of what time and how AI can be engaged, considering its technical benefits versus moral issues about patients' treatment (Armitage, 2023). The interpersonal perspective of AI as a diagnostic tool for healthcare concentrates on patients' and medical staff's influence. AI can play a major role in relieving healthcare workers of regular administration issues, which will consequently enable them to serve their patients better and enhance their job satisfaction. There is a wider change than just the roles of jobs; there is an overall transformation in the health practice. The role of AI in amplifying clinical activities assists healthcare providers with providing better patient results, improving diagnosis precision, as well as promoting patient autonomy. According to Armitage (2013), this transformation process demands a cultural change in healthcare institutions requiring AI and digital skills across the spectrum of the healthcare delivery system. Each of these stages reveals important aspects to be considered in the case.

Results

The critical points that arise concerning the ethics evaluation made on AI integration for diagnostic purposes in healthcare include the following. At the administrative level, the study stresses the need for strong legal, moral, and medical guidelines to handle AI-specific challenges in health care. As demonstrated by Alhasan (2023), issues like accountability in AI–decision-making highlights the need for precise rules and laws. According to the author, accountability is quite hard when making AI directly influence patients' treatment, causing questions about who should be held responsible for AI-based mistakes or adverse effects. Also, the results on the strategic level revealed that there are benefits regarding the use of AI in healthcare through a practical perspective that could include efficiency gains and possibly better patient outcomes. Nevertheless, one should highlight the potential dangers that may result due to these biases in AI models. The biases may lead to unequal treatment results that would be against ethics like beneficence and justice, considering that the dataset used to train the AI might not be fair. Lastly, the interpersonal level revealed that assessment highlights the need to retain humane elements within the healthcare context, like caring, sympathy, and patients' self-control. Though beneficial in its decision-making capacity, such AI may not do justice to human factors of the treatment process. It underscores the importance of carefully integrating AI that appreciates patients' and healthcare professionals' autonomy. This implies that although AI holds a lot of prospects in health, its adoption should occur with caution for the sake of weighing positive techno-ethics towards negative. Such steps involve continual updating of relevant laws, constant surveillance for biases in artificial intelligence, and cooperation among health providers, AI makers, and moralists (Kim, 2023). Such collaboration is essential for the development of an ethical AI code in health care, maintaining human rights, dignity, and justice.

Conclusion

The case study brings out the necessity of proper due diligence about ethics whenever one considers introducing AI in health services. This brings forward a delicate balancing act of technological progress and ethics imperative, stressing the requirement of comprehensive legislative and ethical frameworks, vigilance towards any possible biases, and maintenance of human elements in medical decision-making. These insights are essential as they provide direction on how to make responsible future ethical decisions about AI in the healthcare sector.

References

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