



Artificial Intelligence in health care

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Abstract

Artificial intelligence (AI) is a broad field of study that involves using algorithms, fast processing, and large amounts of data to allow software to learn from experience and perform tasks that humans do. The increasing availability of Health care data and rapid development of big data analytic methods has made possible the recent successful application of AI in health care AI is also used in fitness tracking devices that monitor heart rate, oxygen saturation, sleeping pattern, walking activities etc. helps to generate alerts and take action immediately. AI technologies improve the nursing care of various health conditions, provide complete information to support decision-making, manage medical records, minimize medical errors, optimize nursing care processes, healthcare accessible, provide quality of patient care and improve nursing care. Artificial Intelligence roots in 1956 when Stanford University computer scientist John McCarthy coined the term at the Dartmouth Summer Research Project. "Artificial intelligence encompasses the techniques used to teach computers to learn, reason, perceive, infer, communicate, and make decisions similar to or better than humans".[Speech recognition technology can speed up the process and/or improve accuracy, efficiency, reduce errors, and shorten the time it takes to complete nursing documentation, Sensor-based technologies using measure body movement, collect weight, movement, environmental (temperature, light, sound, air quality) data sensors that monitor activity, sleep, heart rate, rhythm are increasingly affordable with limited resources and staffing. As robotics technology to provide care companions and creates remote-controlled tools, such as telepresence robots face-to-face patient care.

Keywords: Artificial intelligence, encyclopedia of britannica, education, administration, health care, diagnosis, treatment, patient monitoring, virtual assistance, telehealth, training, medication management

Introduction

The use of AI, inclusive of Generative AI, in healthcare is evolving rapidly and has the potential to enhance healthcare outcomes by improving clinical trials, medical diagnosis and treatment, self-management of care, and personalized care. Hospitals use AI and robots to help with everything from minimally invasive procedures to open heart surgery. The increasing availability of Health care data and rapid development of big data analytic methods has made possible the recent successful application of AI in health care AI is also used in fitness tracking devices that monitor heart rate, oxygen saturation, sleeping pattern, walking activities etc. helps to generate alerts and take action immediately.

AI tool used in nursing

AI-driven tools and apps are constantly being developed to assist in various aspects of patient care and administrative tasks, Sensely's virtual nurse assist This AI powered Chatbot known affectionately as Molly, engages patients and supports their healthcare needs Nurses can use this AI tool to monitor and communicate with patients, giving them knowledge, reminders, and important information. In 1950s the integration of AI technology was incited And 1960s natural language processing had begun. In 1970s AI become popularity computer- based teaching materials, such as multimedia learning resources, interactive simulations, and online tutorials, that demonstrated the potential of AI to improve experiences of teaching and learning. In the 1990s, the use of AI generated data through learning analytics and intelligent tutoring systems was introduced and demonstrated improved student performance A recent technology of AI in nursing education is Chat GPT, Chat

GPT, an AI chatbot system, in nursing education has elicited concerns about breaches of academic integrity and ethics and theft of intellectual property, Which can generate a variety of mock simulation cases, patient interviews or job interviews and providing interactive learning experiences and AI can also automate assessment and grading, allowing nursing faculty to focus on other aspects of teaching, AI practices, provide appropriate training and support to educators and students, and implement robust privacy and security measures. AI technology to optimize nurse performance in the nursing care process. Nursing innovative methods using AI technologies such as intelligence agents, machine learning, deep learning, natural language processing, robotic process automation, administrative applications, and explainable or interpretable AI. AI-technology helps nursing administrator can streamline of administrative tasks, personalized learning experiences needs of individual students. By automating routine tasks, such as grading, attendance monitoring, and student progress tracking. The nurse educators gain time to focus on complex teaching, unique insight and expertise. Artificial intelligence (AI) in healthcare technologies transforming nurses' roles and enhancing patient care. AI be integrated into nursing science and healthcare and enhancing patient care. AI be integrated into nursing science and healthcare accurate, practical, effective, efficient, and economical, personalized care, medical records and quality of services AI systems are transparent, explainable, accountable, patient data is handled securely and with consent. Ethical frameworks and guidelines are necessary to ensure that AI is used in a manner that aligns with professional standards and safeguards patient well-being.

Conclusion

It is important to note that AI can provide valuable support to nurses, it is not meant to replace the human touch or expertise gained over decades in the practise. The successful integration of AI in nursing can only be done through a collaborative approach that plays on the strengths of both the technology being used and the human careers who have been a part of this field since the inception of medical care.

Reference

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