AI Direction in Medicine: Systematic Review of Recent Advances and Opportunities

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Abstract: *Contemporary artificial intelligence (AI) tools and technologies integrated into medicine are transforming healthcare by enhancing diagnostic accuracy, personalizing treatments, and improving patient outcomes. AI applications are most advanced in areas like medical imaging, predictive analytics, and personalized medicine, showing promising results in both clinical and research settings. While developed countries lead with substantial investments in AI-driven healthcare, emerging economies are increasingly focusing on the transformative potential of AI, primarily in telemedicine, early diagnostics, and digitalization of health records. Despite its potential, the implementation of AI in medicine faces challenges, including data privacy concerns, regulatory limitations, and the need for standardized frameworks to ensure safety and efficacy across healthcare systems. This systematic review will utilize searches in PubMed, Scopus, and Google Scholar databases with relevant keywords, filtered by publication year and journal index, to examine current AI applications, investment trends, and the opportunities and challenges shaping the future of AI-driven healthcare solutions.*

References

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