



Opinion note

Artificial Intelligence in Ayurveda: amalgamation of modern technology with ancient traditional knowledge

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ABSTRACT

Traditional medicine (TM) has proven effective in treating various diseases and has the potential to promote global health, aligning with the World Health Organization's mission of "Health for All." Artificial intelligence (AI) is playing a key role in improving global health, especially in low- and middle-income countries where access to healthcare professionals is limited. In India, AI is already enhancing the speed and accuracy of disease diagnosis, supporting clinical care, advancing health research, and aiding public health interventions. The AI market in India is growing rapidly, projected to reach USD 8 billion by 2025. In 2024, the WHO Global Traditional Medicine Centre and Digital Health and Innovation hosted a meeting in India to explore how AI can advance traditional medicine. Several Indian AI initiatives, such as Bharat GPT and Desh Ka Prakriti Parikshan Abhiyan, focus on improving health awareness and personalized healthcare. Companies like CAYEIT, Kairali Ayurvedic Group, AyurAI, and NirogStreet are integrating AI with Ayurveda to provide individualized healthcare treatments, demonstrating the potential of AI to enhance and personalize Ayurvedic therapies globally. This research highlights the growing role of AI in Ayurveda and its capacity to improve healthcare access and outcomes worldwide.

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INTRODUCTION

Traditional medicine (TM) has long been recognized for its efficacy in treating a wide range of diseases, and its potential to promote global health aligns with the World Health Organization's (WHO) mission of "Health for All." This mission emphasizes ensuring that health services are accessible to all, regardless of financial status, and traditional medicine plays a significant role in achieving this goal, particularly through the integration of digital health technologies (WHO, 2023). One such technology, Artificial Intelligence (AI), has proven to be particularly beneficial in improving global health, especially in low- and middle-income countries where access to healthcare workers and medical professionals is limited. AI has the potential to bridge these gaps in access by enhancing healthcare delivery, providing faster diagnosis, and making treatments more accessible.

In India, the application of AI has already begun to show promising results. AI technologies are improving the speed and accuracy of disease diagnosis and screening, assisting with clinical care, advancing health research, supporting drug development, and facilitating various public health interventions such as disease surveillance, outbreak response, and health systems management. However, there is currently a lack of specific laws and regulations governing the use of AI in India. Despite this, the Indian government has introduced several initiatives

and guidelines to foster the responsible development and deployment of AI technologies. The AI market in India is growing rapidly, with a compound annual growth rate (CAGR) of over 40% from 2020 to 2025, and is expected to reach \$8 billion by 2025 (ITA, 2024).

In 2024, the WHO Global Traditional Medicine Centre (GTMC) and the Digital Health and Innovation (DHI) organized a global technical meeting at the All India Institute of Ayurveda (AIIA) in New Delhi. This meeting focused on exploring how AI can be leveraged to advance traditional medicine and improve access to health services (WHO, 2024). The discussions included ways to ensure equitable access to AI applications and the fair distribution of benefits, particularly through intellectual property (IP) agreements. In line with this, the Government of India has launched an indigenous AI system, Bharat GPT, which is capable of generating human-like text in several Indian languages such as Hindi, Tamil, and Telugu. Additionally, the Ministry of Ayush launched a health awareness campaign, 'Desh Ka Prakriti Parikshan Abhiyan,' aimed at identifying individuals' Prakriti to personalize health interventions.

PRIVATE PARTNERSHIP IN PROMOTING AI IN AYURVEDA

Several companies and startups in India are also exploring the fusion of AI with Ayurveda, offering personalized

healthcare treatments. CAYEIT, for example, is the world's first 'Ayurveda AI,' which has been used by over 20,000 individuals globally. The platform features AI-based tools like the Shloka Interpreter and AyurChef, which help users understand Ayurvedic texts and prepare personalized Ayurvedic diets. The Kairali Ayurvedic Group has launched KAAI, an AI application designed to assist Ayurveda practitioners in delivering more effective care. AyurAI uses advanced AI algorithms that integrate Ayurveda principles with digital biomarkers, blood biochemicals, and genomics to provide highly personalized treatments. Other AI tools, such as 'e-Dravya' (for selecting medicinal herbs), 'e-Roga' (for exploring Ayurvedic symptomatology), and 'e-Chikitsa' (for suggesting classical Ayurvedic medicines based on symptoms), are being used to enhance the precision of Ayurvedic care (Mundargi et al., 2024).

Additionally, companies like NirogStreet and CureMetrix (backed by Khosla Ventures) are delivering personalized wellness solutions and expanding the use of AI in holistic healthcare. NirogStreet focuses on providing individualized wellness solutions, while CureMetrix, originally focused on medical imaging, has extended its AI technology to analyze patient data for preventive and holistic healthcare. In Sri Lanka, the AI module 'NIWARANA' helps users access information about the best Ayurvedic doctors specializing in various medical areas.

These initiatives highlight the potential of AI to enhance and personalize Ayurvedic therapies, making this ancient practice more accessible to a global audience. The application of AI in Ayurveda is not only improving the precision of treatments but also making them more tailored to the individual, thereby enhancing the overall effectiveness of traditional medicine.

CONCLUSION

The research papers on this topic underline the transformative role AI is playing in Ayurveda. By combining traditional knowledge with advanced AI-

powered methods, these innovations are helping to extract more valuable information from databases and practitioner experience, thereby promoting the future of personalized, accessible, and efficient Ayurvedic healthcare.

CONFLICTS OF INTEREST

The author(s) declare(s) no conflicts of interest.

DECLARATION

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