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Review- Uses and Relevance of Artificial Intelligence in Ayurveda

Dr. Sayali M. Kewat[1*] and Dr. Jyoti Nirbhawane[2]

[1]PG Scholar, Department of Shalakya Tantra, SMBT Ayurved College and Hospital, Nashik, Maharashtra, India
[2]Associate Professor and PG Guide, Department of Shalakya Tantra, SMBT Ayurved College and Hospital, Nashik, Maharashtra, India

Abstract
Ayurveda, the science of life is utilized for maintenance of health since ancient time. The main objective was to prolong lifespan of human subjects and also to maintain and promote their positive health and the same is the motto of Ayurveda science. Upgrading yourself is the only way of staying ahead. To upgrade is to make improvement in something or exchange it for better version. There may be up gradation of skills, knowledge or system. Ayurveda is a science of life with a holistic approach to health and personalised medicine. It is one of the oldest medical systems, which comprises thousands of medical concepts and hypothesis. Ayurveda has ability to treat many chronic diseases such as Cancer, Diabetes, Arthritis and Asthma. So, for upgrading this ancient and precious system of medicine there must be full-fledged inclusion of technology that allows computers and machines to function in an intelligent manner. This computer or machine-based intelligence is called as Artificial intelligence. It is the simulation of human intelligence processes by machines, especially computer systems. We all know that technology has great potential in reducing overloads from human shoulders, storage capability, saving costs and lots more. But its functionality in Ayurveda, for some people, might be indigestive. That's because Ayurveda regarded as something primitive and obsolete in compare to AI (Artificial Intelligence), which came in to the view a few years back and is regarded as revolutionary and futuristic. By adopting and adapting this digital world in the field of ayurveda we can create a revolutionary change.

KEYWORDS: Ayurveda, Artificial intelligence, Ayurvedic, Dosha-Pulse.

INTRODUCTION

Upgrading yourself is the only way of staying ahead. To upgrade is to make improvement in something or exchange it for better version. There may be up gradation of skills, knowledge or system. Ayurveda is a science of life with a holistic approach to health and personalized medicine. Ayurveda is an old healing system that started in India. The widespread acceptance of this ancient medicinal practice is due to its novel concepts concerning health and natural remedies. Ayurveda has ability to treat many chronic diseases such as Cancer, Diabetes, Arthritis and Asthma. So, for upgrading this ancient and precious system of medicine there must be full-fledged inclusion of technology that allows computers and machines to function in an intelligent manner.[1] This computer or machine-based intelligence is called as Artificial intelligence. Researchers have combined AI with additional technological advances to enhance Ayurvedic medicines' efficiency, availability, and reliability. The study analyzes how AI influences Ayurveda. It is the simulation of human intelligence processes by machines, especially computer systems. We all know that technology has great potential in reducing overloads from human shoulders, storage capability,

saving costs and lots more. But its functionality in Ayurveda, for some people, might be indigestive. That's because Ayurveda regarded as something primitive and obsolete in compare to AI (Artificial Intelligence), which came in to the view a few years back and is regarded as revolutionary and futuristic. By adopting and adapting this digital world in the field of Ayurveda we can create a revolutionary change.[2] AI has risen as a highly promising instrument for transforming the health care sector, and its fusion with *Ayurveda* is paving the way for innovative possibilities within traditional medicine. *Ayurveda,* a time-honored medical system with its origins in India, emphasizes the holistic approach to healing, focusing on the individual's unique constitution and imbalances. The incorporation of AI into *Ayurvedic* diagnosis presents an exciting opportunity to enhance the accuracy and precision of assessments, thereby providing personalized treatment plans for patients. This article explores the current concepts and applications of AI in *Ayurvedic* diagnosis, shedding light on the potential benefits and challenges associated with this transformative fusion. AI's application in *Ayurvedic* diagnosis involves the use of sophisticated algorithms to analyze vast amounts of patient data, including clinical history, symptoms, and diagnostic reports. By examining diverse data sets, AI algorithms can identify patterns and associations that may not be apparent to human practitioners.[3] This aids *Ayurvedic* physicians in making more precise diagnoses, enabling them to tailor treatments to suit the individual's unique constitution and health condition.

One significant benefit of AI in *Ayurvedic* diagnosis is its potential to augment the traditional methods of *Prakriti* (~constitution) analysis. Traditional Ayurvedic diagnosis involves an in-depth assessment of an individual's constitution (prakriti) and identification of imbalances (vikriti) in their doshas (Vata, Pitta, and Kapha). AI algorithms now enable Ayurvedic practitioners to process extensive health data, encompassing genetic information, lifestyle choices, and medical history. This data-driven approach enhances the accuracy of prakriti and vikriti assessments, leading to more precise treatment plans. AI's capacity to analyze vast datasets enables the creation of highly personalized ayurvedic treatment plans.

AI can also be used to analyze the efficacy of Ayurvedic treatments and remedies. By studying large datasets of patient outcomes, AI can help identify which treatments are most effective for specific conditions.This can help Ayurvedic practitioners to provide more accurate and evidence-based treatments for their patients.[4] Herbal remedies are fundamental to Ayurvedic medicine. Artificial intelligence plays a crucial role in conducting thorough analyses of numerous plants' properties and interactions, thereby facilitating the development of herbal remedies.[6] To minimize the occurrence of adverse effects or contraindications, this evidence-based approach ensures the customization of herbal medications according to individual requirements.AI-driven telemedicine and remote monitoring have revolutionized Ayurvedic healthcare delivery. Patients can now access consultations with Ayurvedic practitioners online, receive personalized treatment recommendations, and have their progress monitored through wearable devices. Artificial intelligence accelerates Ayurvedic research and development by mining vast datasets encompassing clinical trials, historical texts, and patient records. AI analysis identifies trends, uncovers novel insights, and potentially discovers new treatment modalities. This data-driven approach validates Ayurvedic practices and expands the horizons of Ayurvedic applications in healthcare.[7] A big step forward in science is artificial intelligence in Ayurveda. AI helps Ayurvedic medicine move forward while keeping its old knowledge.[8] It does this through online, personalized treatment plans, better plant formulas, and studies. These interactions make Ayurveda a strong and flexible medical system that helps people all over the world with their overall health.AI has the capacity to revolutionize *Ayurveda* by infusing it with cutting-edge technology, enhancing diagnostics, personalizing treatments, and supporting drug discovery.[9] However, striking the right balance between tradition and innovation and addressing ethical concerns are crucial in unlocking AI's full potential in *Ayurveda.* By fostering collaboration and promoting responsible AI deployment, we can create a harmonious union between ancient wisdom and modern science for the betterment of health care and humanity.[5]

Technology Developes at a demand of the science for the benefit of end user. Technology adoption in the field of Ayurveda is taking place in various form-

❖ Knowledge - Tele conference - e-CME - e- lecturing - RDBMS

❖ Problem solution - Instrumentation for Ayurvedic diagnosis - Nadi (dosha-pulse) analyzer - Remote (robotic) surgery

❖ Research - Drug pathway analysis - Absorption /target/ action of medicine - Namburi spot test Disease based objective parametric evaluation. Another area where AI can be useful in Ayurveda is in the development of new formulations and remedies. By analyzing the chemical composition of various herbs and natural substances, AI can help identify potential synergies and combinations that may be effective in treating specific conditions. As experts in Ayurveda, we use both old and new ideas to bring this historical information up to date with AI.

REFERENCES

1. Yati GN. Ayurveda - a holistic science. Anc Sci Life. 1992;12:286–8.
2. Rajpurkar P, Chen E, Banerjee O, Topol EJ. AI in health and medicine. Nat Med. 2022;28:31–8.
3. Kumaraswamy BV. Understanding the etiopathogenesis and diagnosis of malignancy in the framework of Ayurveda: A review based on experience of working in an institute of oncology. Ayu. 2020;41:58–65.
4. Kurande V, Waagepetersen R, Toft E, Prasad R, Raturi L. Repeatability of pulse diagnosis and body constitution

diagnosis in traditional Indian Ayurveda medicine. Glob Adv Health Med. 2012;1:36–42.

5. Analytics Insight [Internet]. Available from: http://www.analyticsinsight.net

6. The Asian Age [Internet]. Available from: http://www.asianage.com

7. Fit The Quint [Internet]. Available from: http://fitthequint.com

8. Jiva [Internet]. Available from: http://www.jiva.com

9. Amin H, Sharma R. How data mining is useful in Ayurveda. J Ayu Herb Med. 2016;3:61–2.

10. NIWARANA: An artificial intelligence-based system for traditional medicine [Internet]. Available from: DOI: 10.13140/RG.2.219949.23522ER